

# TECHNOLOGY

## REVIEW

*July* 1953



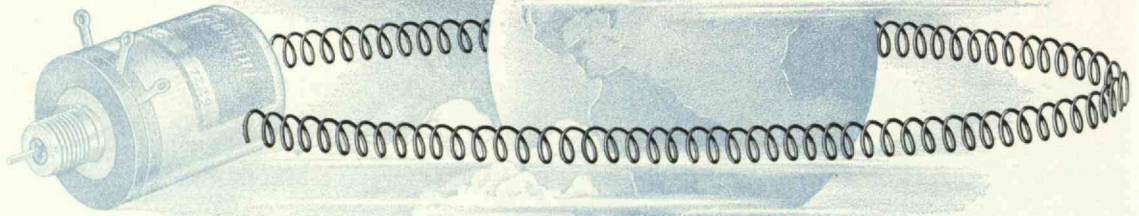
# technology review

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# *pioneers in precision*



## **G. M. Giannini and Co. Inc.,**

a pioneer in remote control and indicating instrument development, is the foremost manufacturer of toroidally wound low torque potentiometers. Microtorque and Rotostepper unit combinations have been used in many unusually difficult control instrument applications.

## **Miniature Precision Bearings**

incorporated, pioneered and developed the first miniature radial ball bearings. From a group of five original ball bearings, **MPB** has designed and developed a completely integrated line of more than 130 types and sizes many of which now form the basis for international standardization. This extensive variety of **MPB** ball bearings makes possible the application of anti-friction and freedom from attention qualities in thousands of miniaturization projects.

**MPB** ball bearings are fully ground, lapped, and/or honed to ultra precision finishes (ABEC 5 or better). They are torque tested, ultrasonically cleaned, supplied in specific tolerances and classified within the tolerances for prompt assembly and maximum service. **MPB** ball bearings are normally supplied in 10 design series, from 1/10" to 5/16" o.d., of selected chrome bearing steel. Most are also supplied in stainless steel, some in beryllium copper, and all are assembled with best quality balls.

More than a million **MPB** ball bearings have played a vital part in the efficient operation of aviation instruments, railway and marine indicating and recording devices, cameras, medical appliances and other equally fine mechanisms. The wealth of engineering knowledge gained through participation in an extraordinarily broad field of application is available to you.

*Our facilities have been expanded so that we can now schedule prompt delivery of most sizes. Our completely new and enlarged catalog is now being distributed, and will be gladly mailed if you request Bulletin TR7.*

## **Miniature precision Bearings**

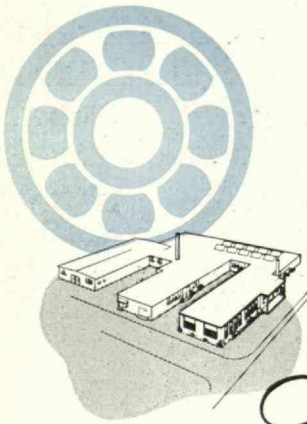
Incorporated



Keene, New Hampshire

*"Pioneer Precisionists to the World's foremost Instrument Manufacturers"*

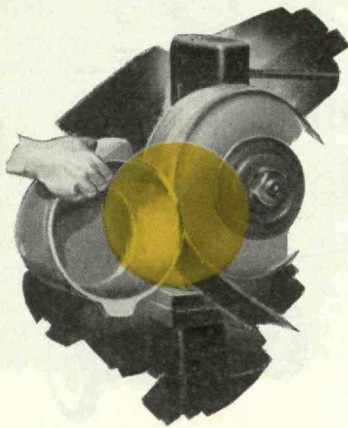
*save  
space  
weight  
friction*





WITH ABRASIVES THAT FIT THE JOB -

# You get the "TOUCH of GOLD"



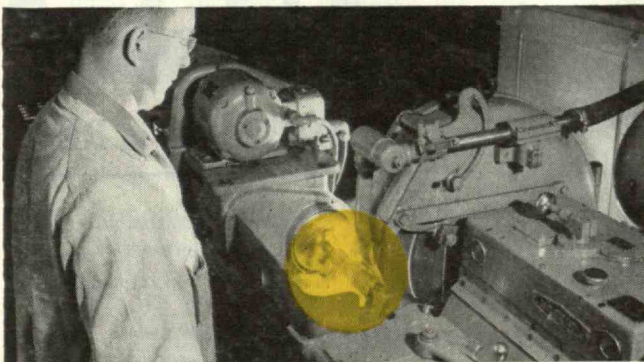
You *can* have it! Modern grinding and finishing become a source of higher profit when you have the "Touch of Gold."

You give men in your shop the "Touch of Gold" when you have them use Norton and Behr-Manning abrasive products. Every time one of these abrasives touches work in process, it adds to the value — in terms of usefulness to your customer, profit to yourself. Superiority is "engineered in" through years of wide experience, vast resources and long leadership in the field.

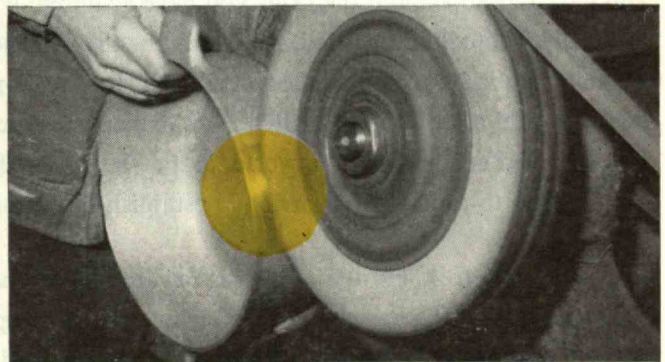
Norton Company, Worcester 6, Mass.

Behr-Manning Corporation, Division of Norton, Troy, N. Y.

Plants, distributors and dealers the world over.



A "Touch of Gold." When a man uses this Norton 6" cylindrical grinding machine equipped with a Norton wheel, high production and precision work result . . . he has the "Touch of Gold."



A "Touch of Gold." He's boosting the profit-margin when he polishes aluminum utensils with Behr-Manning's LIGHTNING METALITE cloth belt. It's fast, efficient and long-lived.

*Making better products to make other products better*



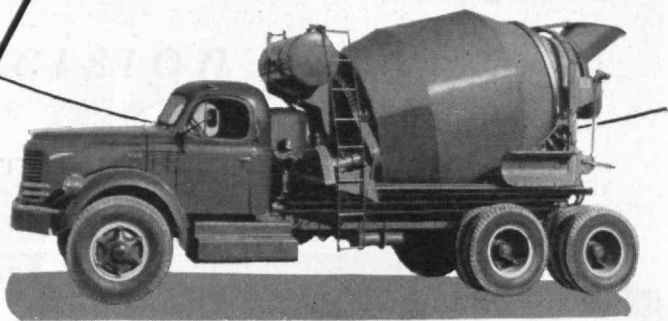
**NORTON**



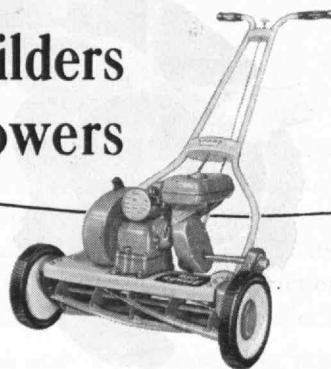
**BEHR-MANNING**



# America's Toughest Trucks



## World's Largest Builders of Power Lawn Mowers



*It's a Good Feeling!*

**Good to Know** that the technical ability you have developed and the skills you have acquired are really wanted, and needed. And to know that nowhere in American industry is a higher premium placed on top engineering and technical ability than at REO. M.I.T. men are among the finest trained engineers in the world, and at REO they find full opportunity to prove their worth and establish their future.

**It's Also Good to Know** that ability is rewarded, and that at REO you are not just another cog in the machine, but an important part of an important operation. Your climb up the ladder of success is largely dependent on you, but at REO you get every help and assist that anyone could ask for.

*Trucks • Engines • Bus Chassis • Lawn Mowers • Wheel Goods*

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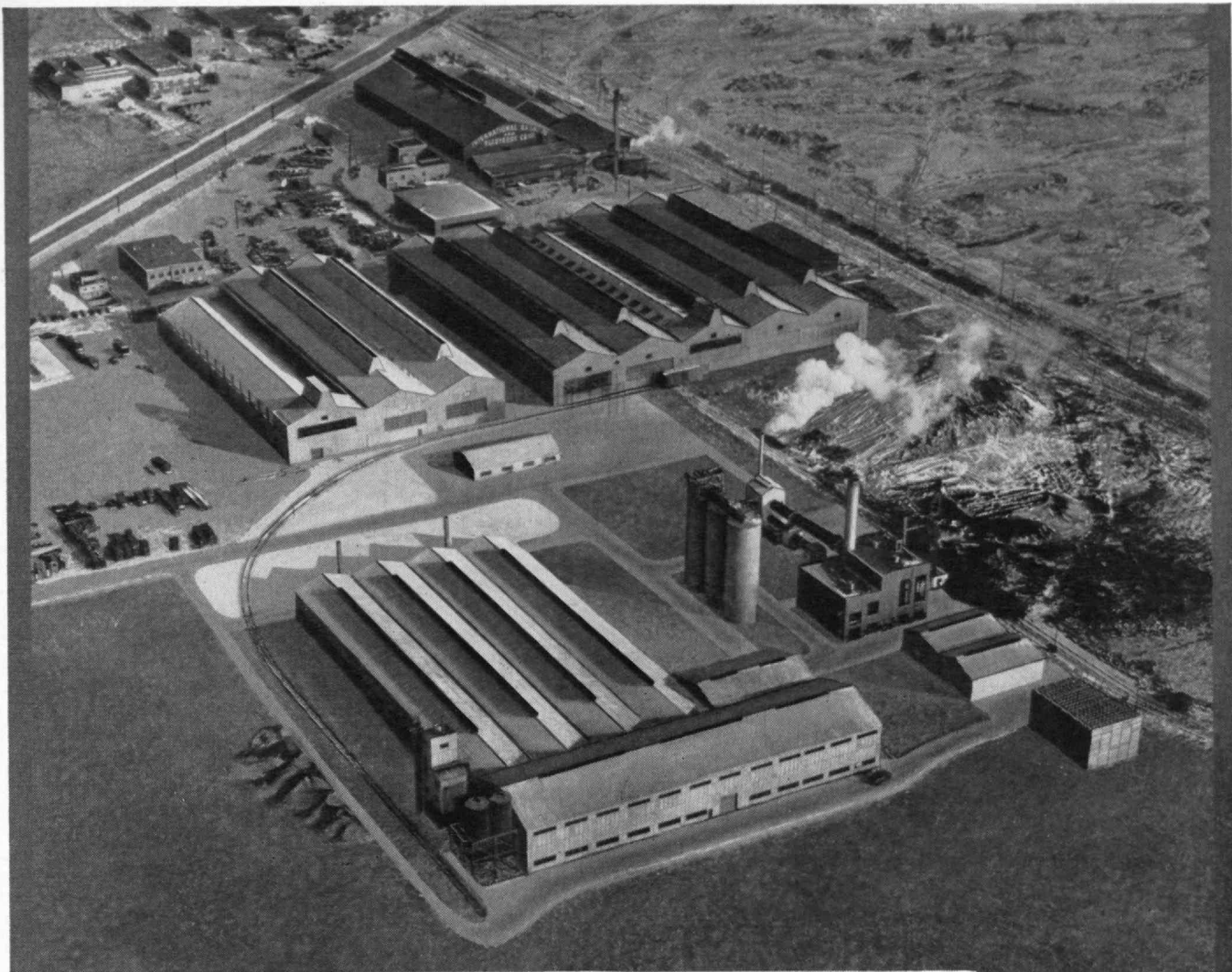
# REO

### M.I.T. Men at REO

**Joseph S. Sherer, Jr.**  
Class of 1923  
President and General Manager

**William Walworth**  
Class of 1926  
Vice President, Engineering

**Paul H. Rosenberg**  
Class of 1937  
Chief Engineer  
Lawn Mower Division



## A Report was Essential

When International Graphite & Electrode Corporation foresaw the need of increased facilities for the manufacture of graphite electrodes, Stone & Webster Engineering Corporation was asked to make a report and recommendations.

The report included a process study, a geographical analysis of product distribution, and a plant site survey which considered both economical distribution and the availability of power and skilled labor.

When, in accordance with the recommendations, International Graphite decided to add extensive new facilities to its Niagara Falls plant, Stone & Webster Engineering Corporation was employed to design and build them.

*International Graphite &  
Electrode Division, Spear  
Carbon Company, Niagara  
Falls, N. Y.*



# STONE & WEBSTER ENGINEERING CORPORATION

A SUBSIDIARY of STONE & WEBSTER, INC.





*No other type of equipment  
is used by a larger number or  
greater variety of industries than*

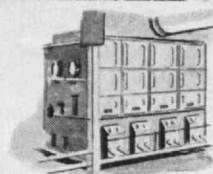
# ROSS INDUSTRIAL FROM DESIGN TO INSTALLATION AIR SYSTEMS

Back in the 1920's, ROSS pioneered in the use of scientifically controlled air to increase production at lower cost in the nation's major industries. During the 32 years since then, many new types of products have been developed, new major industries established and today more than 2,000 leading manufacturers in practically all industries, including the newest—Television—have installed ROSS Industrial Air Systems for maximum production efficiency.

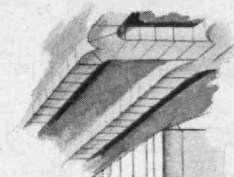
• • •

ROSS' recognized leadership in this field is based upon long experience and engineering ability, modern extensive testing and manufacturing plants and facilities, a national and international service organization and a 32 year record of successful performance.

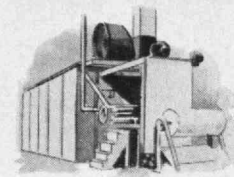
You can rely upon recommendations by ROSS. Write us for information concerning specific processing problems.



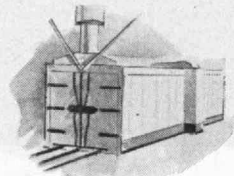
HEATING



VENTILATING



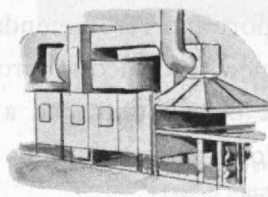
DRYING



BAKING



CURING



TREATING

## J. O. ROSS ENGINEERING CORPORATION

Saxton W. Fletcher '18 — President

Main Office—444 Madison Avenue, New York 22, N. Y.

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LOS ANGELES

ROSS ENGINEERING OF CANADA, LIMITED, MONTREAL, CANADA

CARRIER-ROSS ENGINEERING COMPANY, LIMITED, LONDON, ENGLAND

# Enroute

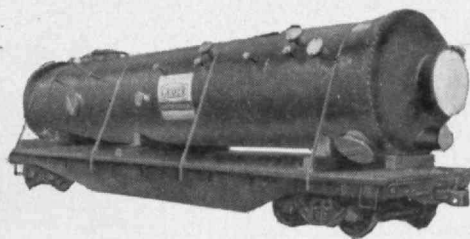
## GRAVER

### PRECISION FABRICATIONS

**meeting Industry's  
most exacting standards**

Where precision craftsmanship is required in tough-to-handle metals, you may rely on Graver. Nearly a century of experience in building tanks, combined with resourceful creative engineering, helps to explain the continuous flow of Graver vessels to the process and petroleum industries.

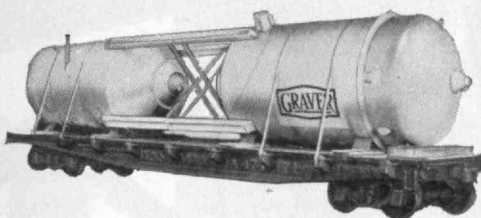
This is especially true in the fabrication of



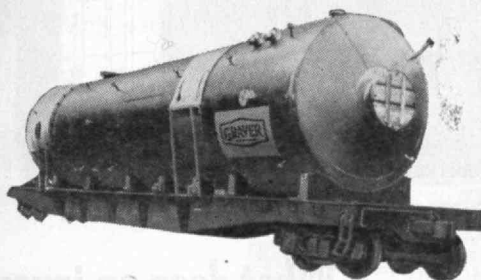
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SOLID STAINLESS TOWER



ALUMINUM TOWER

towers and vessels of alloys and aluminum. Here Graver's rigid quality control, sound welding research, and ability to work to close tolerances result in highest quality products. For *really difficult jobs*, look to Graver!

## GRAVER

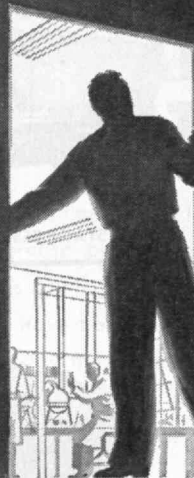
PROCESS VESSELS

### GRAVER TANK & MFG. CO., INC.

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DETROIT • CLEVELAND • PITTSBURGH • HOUSTON  
CATASAUQUA, PA. • SAND SPRINGS, OKLA. • CASPER, WYO.





## What does an inventor look like?

**In 1850**, Samuel Kier built a one-barrel "teakettle" refinery in Pittsburgh. There, through his own genius, he first distilled petroleum and became America's pioneer oil refiner. But how times have changed.

**Today**, a new product is rarely *one* man's creation. The better products get, the harder it is to improve them. Now, many men of many skills must work together in research centers on projects planned long ahead.

**For example:** two years ago we saw the need for a new kind of motor oil that would fully meet the demands of precision-built, high-compression automobile

engines. Among other things, this special oil must flow with full pressure at zero temperature—yet give full protection at 400 degree heat.

**One man would never** have the skills, time, devices or money to cope with such a complex problem. But at our Brea research center a team of Union Oil engineers solved it. And Union was the first to give the West this better lubricant.

**Naturally we're proud** to add new Royal Triton 5-20 motor oil to our many firsts. We think this new Union Oil product is one more proof that the best *progress* comes from an economic system that

gives the best *incentives*. American *free, competitive enterprise* provides these incentives as no other system ever has.

### UNION OIL COMPANY OF CALIFORNIA

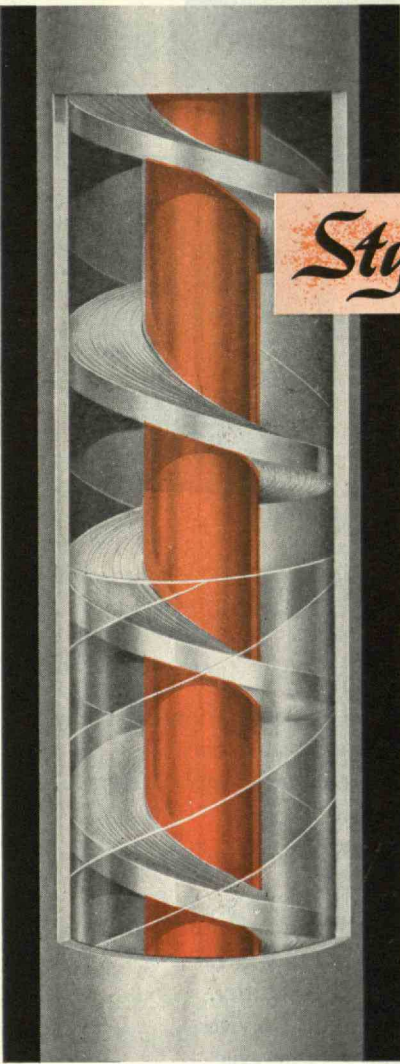
INCORPORATED IN CALIFORNIA, OCTOBER 17, 1890

*This series, sponsored by the people of Union Oil Company, is dedicated to a discussion of how and why American business functions. We hope you'll feel free to send in any suggestions or criticisms you have to offer. Write: The President, Union Oil Company, Union Oil Building, Los Angeles 17, California.*

# TWO REVOLUTIONARY NEW CABLE DESIGNS

**Available to American Cable Users—Illustrate International Scope of Phelps Dodge Research and Technical "Know-How"!**

Under arrangements concluded with leading European cable designers, Phelps Dodge Copper Products Corporation offers U. S. cable users:



## *Styroflex* COAXIAL CABLE

developed by Felten & Guillaume, Cologne, Germany. The strong, semi-flexible aluminum sheathing on this cable opens possibilities for many new and interesting uses.



## 400 KV OIL-FILLED POWER CABLE

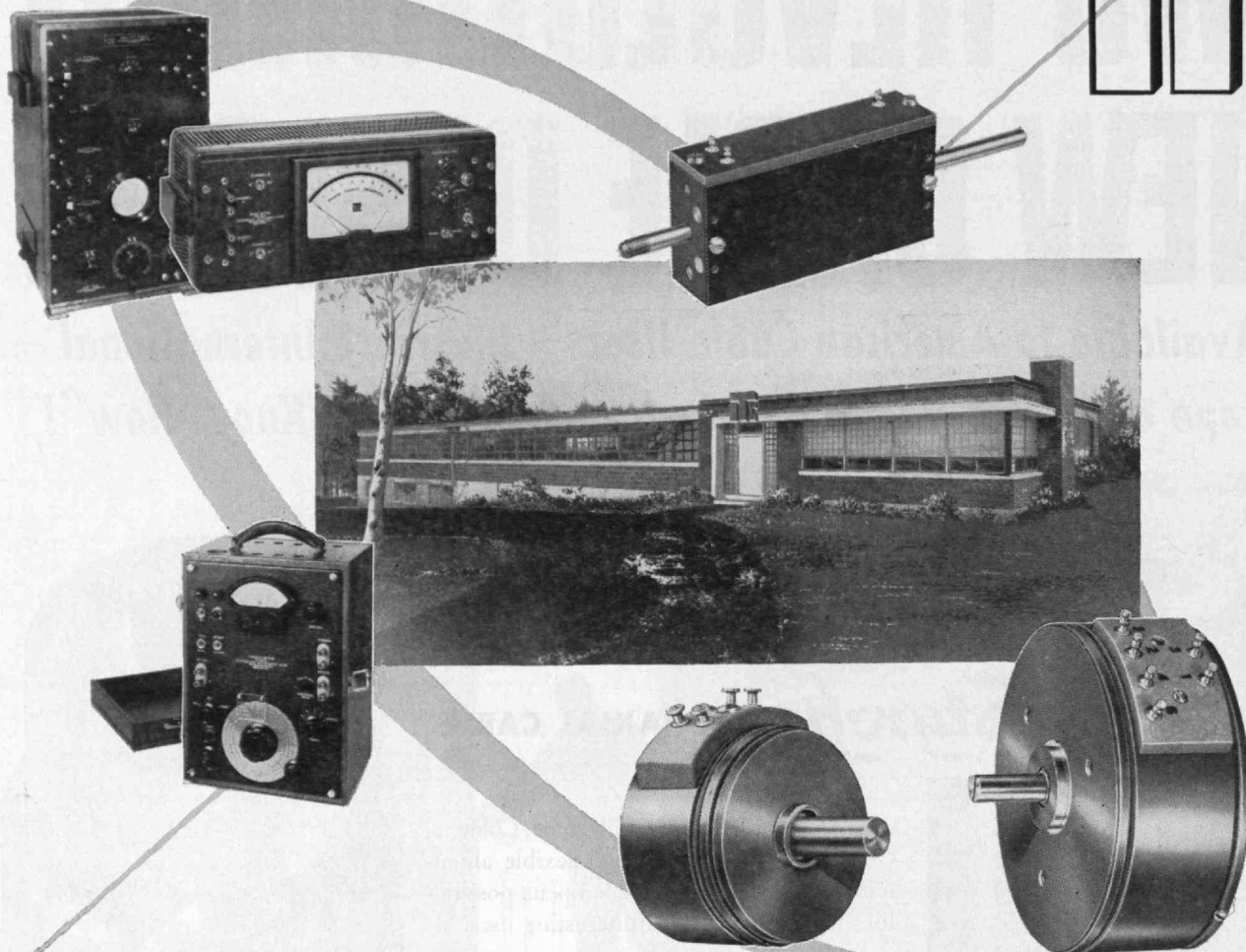
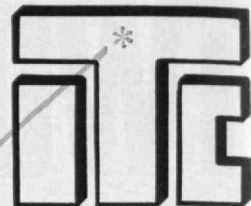
designed by Les Cables de Lyon, France. This cable is presently in service in Sweden.

These new cables exemplify Phelps Dodge's policy of supplementing its own broad research with the latest foreign developments in cable research and manufacture. This international "know-how" is one of the reasons why Phelps Dodge enjoys a wide reputation among engineers for the finest in modern power and communication cables.

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# \* TECHNOLOGY *is very much at home here*

## *Laboratory Instruments*

Staffed by many MIT graduates, Technology Instrument Corporation is actively engaged in manufacturing a unique line of superb measuring instruments for both the laboratory and industry . . . Impedance Measurement Z-Angle Meters . . . Phase Meters . . . Primary and Secondary Phase Standards . . . High Gain Wide Band Decade Amplifiers . . . R-F Oscillator.

## *Precision Potentiometers*

The Technology Instrument Corporation is also a leader and pioneer in the newly developed industry manufacturing *precision linear and non-linear potentiometers* and is setting the pace for both accuracy and versatility. These potentiometers are designed for application in computing devices, instrumentation, electronic control and servo mechanisms — wherever extreme electrical and mechanical precision is an essential requirement.

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# TECHNOLOGY INSTRUMENT CORP.

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THE TECHNOLOGY REVIEW

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4

Neutrons

Positive ions

X-rays

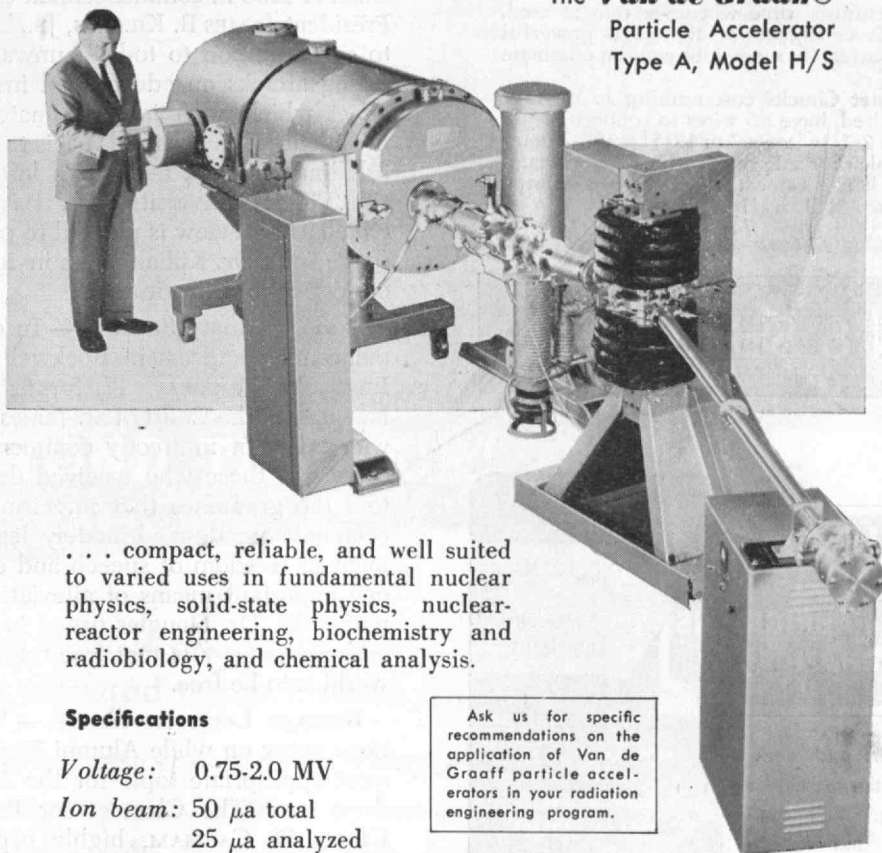
Electrons

## SELECTIVELY FROM 1 ACCELERATOR

The **Van de Graaff®**

Particle Accelerator

Type A, Model H/S



... compact, reliable, and well suited to varied uses in fundamental nuclear physics, solid-state physics, nuclear-reactor engineering, biochemistry and radiobiology, and chemical analysis.

### Specifications

**Voltage:** 0.75-2.0 MV

**Ion beam:** 50  $\mu$ a total  
25  $\mu$ a analyzed

**Electron beam:** 100  $\mu$ a for external use  
250  $\mu$ a for x-ray production

**Ion-beam energy stability:**  $\pm 2$  keV

**Electron-beam energy stability:**  $\pm 40$  keV

**Neutron output from  $\text{Be}^9 (d, n) \text{B}^{10}$  reaction:**..... $10^{10}$  n/sec.

**X-ray output from gold target:**.....5000 r/min. at 10 cm

**Electron ionizing power:**..... $2 \times 10^7$  gram-rep/sec.

**Overall dimensions:**.....height . . . 6 feet, width . . . 4 feet  
generator tank length . . .  $6\frac{1}{2}$  feet  
analyzing system length . . . 10 feet

**Weights, accelerator and mount:** 6000 pounds.

Ask us for specific recommendations on the application of Van de Graaff particle accelerators in your radiation engineering program.

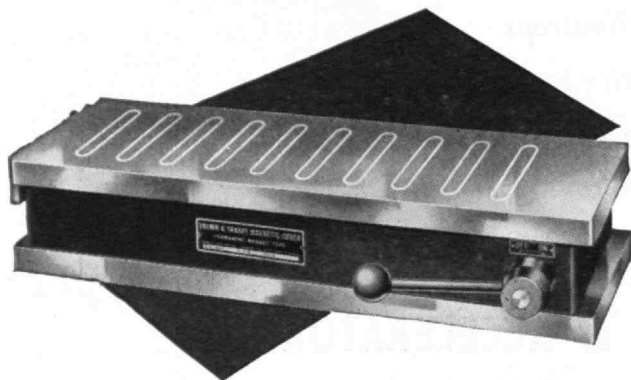
## HIGH VOLTAGE ENGINEERING CORPORATION

7 UNIVERSITY ROAD

CAMBRIDGE 38, MASSACHUSETTS



# Save waste motion of machinists



**RECTANGULAR PERMANENT MAGNET CHUCKS** by Brown & Sharpe save machinists' time whenever they're used. A quick shift of a lever engages or disengages powerful magnetic holding power. On many jobs you can eliminate jigs or fixtures.

Permanent Magnet Chucks cost nothing to operate, hold as long as desired, have no wires to connect. Available in 6 sizes from 2-7/16" x 5 1/4" to 12 1/8" x 36". Rotary models also available. For sale only in the United States and its territories. Write for catalog. Brown & Sharpe Mfg. Co., Providence 1, R. I., U.S.A.

*We urge buying through the Distributor*

**BROWN & SHARPE** 

**ARTISAN  
METAL PRODUCTS INC  
EQUIPMENT FABRICATORS  
WALTHAM  
MASS U S A**

THE HALLMARK  
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SUPERIOR  
EQUIPMENT

Artisan engineers and workmen are skilled in the techniques of metal working. Their combined knowledge and experience in engineering and building special equipment and machinery have been of value to many leading mechanical and process industries.

Write for a copy of "Process Equipment". For a qualified engineer to call to discuss your equipment requirements, telephone Waltham 5-6800 or write to: — James Donovan, '28, General Manager.

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73 POND STREET, WALTHAM, (Boston 54) Mass.

## THE TABULAR VIEW

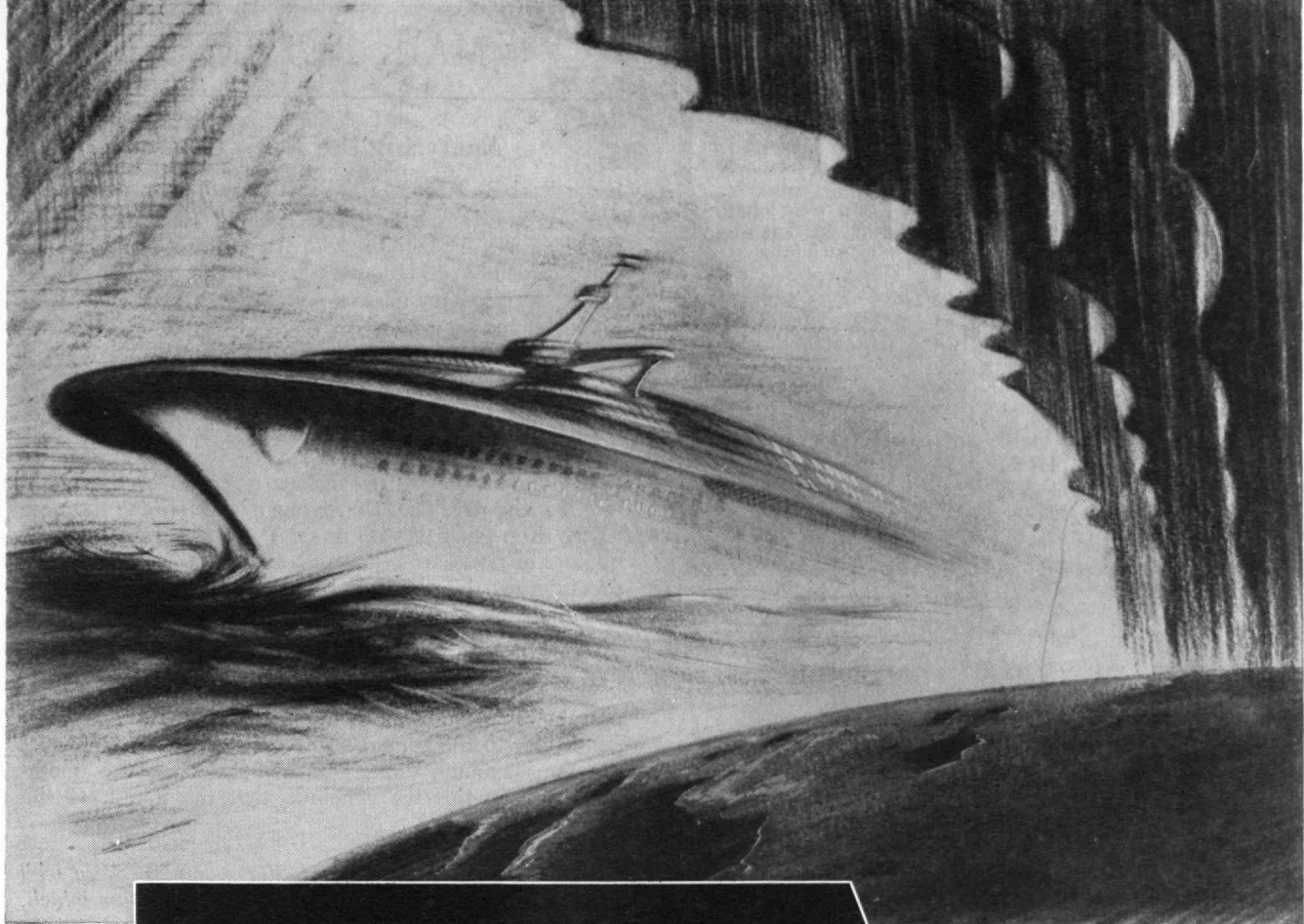
**Baccalaureate Address.** — On June 11, members of the Class of 1953 donned caps and gowns in academic procession to Walker Memorial where they listened to the baccalaureate address, delivered by the REVEREND FREDERICK M. MEEK, minister of the Old South Church in Boston, since 1946. Dr. Meek's inspirational message emphasized that the true values and meanings of democracy may easily be lost by allowing secondary aims and auxiliary devices to be treated as primary aims. Dr. Meek's address appears in this issue under the title, "Democracy Is Not Enough" (page 485).

**Valedictory Finesse.** — In bidding farewell to the Class of 1953 in commencement exercises on June 12, President JAMES R. KILLIAN, JR., '26, took opportunity to call attention to today's unwarranted and deprecating attacks on educational institutions. The only effect which such indiscriminate tactics can have, President Killian reminds us, is to retard the nation in fulfilling its great needs and lofty goals. Under the title, "Our Universities — A Bastion for America," which The Review is pleased to present to its readers (page 489), Dr. Killian urges invigorating support for our educational institutions.

**Undergraduate Success.** — In delivering the commencement address in Rockwell Cage on June 12, LEWIS W. DOUGLAS, '17, former United States ambassador to the Court of St. James, presented a worldwide view in indirectly commenting on the future careers of those who received degrees. Dr. Douglas told the graduates that impairment of the right to economic freedom ultimately leads to the infringement of freedom of speech and even of worship. As one important means of alleviating the world's economic ills, Dr. Douglas urged in his commencement address (page 491) that free trade be resumed if the world is to be free.

**Banquet Lecturers Assess.** — With truce negotiations going on while Alumni Day was in progress, a most appropriate topic for the Alumni banquet address was "The Chances for Peace," delivered by ERWIN D. CANHAM, highly experienced and able journalist and editor of the *Christian Science Monitor*. Dr. Canham's assessment of this important problem (page 495) represents an exceedingly broad point of view. Lasting peace, he reaffirms, requires that there must be confidence and respect between nations and peoples of the world, just as there must be between individuals.

**Campus Rendezvous Access.** — Hundreds of Alumni and their families returned to the Technology campus at the end of the school year to attend commencement exercises, to partake in events of Alumni Day, or to have full access to the campus as reunioning members of the class that left the Institute a quarter century ago. The Review's summary of these events appears in this issue, beginning on page 499. Plentiful illustrations of these important events — representing the work of the M.I.T. Photographic Service — are distributed throughout almost the entire issue.



## BEYOND THE HORIZON....

Most of the current alloys developed for engineering use at elevated temperatures contain Molybdenum.

As stresses and temperatures—such as those used for marine propulsion power plants—increase, it is certain that the alloys which make this possible will rely more and more upon their Molybdenum content.

Climax furnishes authoritative engineering data on Molybdenum applications.

**Climax Molybdenum Company**  
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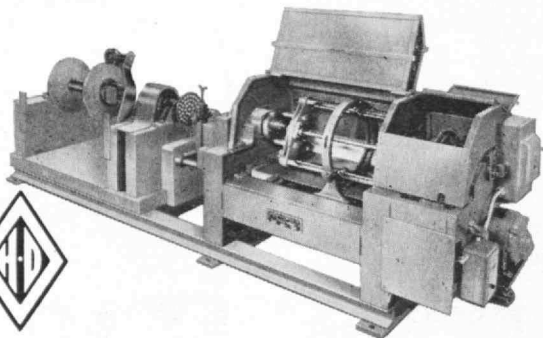
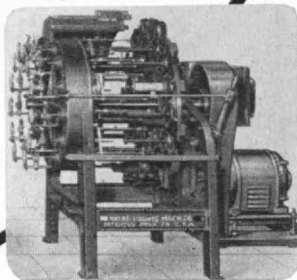
## SPECIALIZED EXPERIENCE, FACILITIES AT YOUR SERVICE TO SOLVE YOUR bunching (twisting) and stranding problems

Expanding application of twisting principles to the production of many products is reflected by an ever-increasing demand for both H-D standard equipment as well as machines especially engineered to solve varied production problems. Week after week surprising new uses are developed through the close co-operation of our engineering department with manufacturers in many fields.

Write today for our New Technical Bulletins. Tell us what you make—or contemplate making and your inquiry will receive prompt attention.

WRITE TODAY. YOUR INQUIRY  
WILL GET PROMPT ATTENTION

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Users of Curtis Universal Joints  
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- ① 14 sizes —  $\frac{3}{8}$ " to 4" O.D. in stock at all times for immediate shipment; bored or unbored hubs.
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- ④ Each part of specially selected steel, individually heat treated for a specific purpose—efficient service for a longer period of time.

#### Special Applications

Facilities and engineering skill for 6" diameter joints or other special specification jobs are immediately available.

Not sold through distributors: write direct for free engineering data and price list.

**CURTIS UNIVERSAL JOINTS**

8 BIRNIE AVENUE • SPRINGFIELD, MASS.

As near to you as your telephone

A MANUFACTURER OF UNIVERSAL JOINTS SINCE 1919

## MAIL RETURNS

### Analyzing the April Cover

From Karl R. Kennison, '08:

I was very much intrigued by your Professor Edgerton's wonderful photograph of the twirling baton on the cover of your April issue. It occurs to me that this photograph provides an answer to the question: How long is the baton?

The center of gravity of the baton must travel in a parabola from the time it leaves the hand until it is caught. This parabola is precisely determined by the several points at which it is tangent to the baton. The  $1/60$ -second intervals of time are precisely determined by the points at which the various positions of the baton intersect the parabola. Hence one can determine the time of the drop from the top or peak of the parabola to any number of positions that may be selected. In fact greater precision can be obtained by averaging the time of rise and the time of fall. Since this time is directly related to the acceleration due to gravity the scale of the photograph can be found, namely about one  $1'' = 0.85'$ . The length of the baton in the photograph varies but this is presumably because the plane of its rotation was not perpendicular to the camera's line of sight. Hence we must use the maximum dimension, namely  $3''$  on the photograph. From this we conclude that the length of the baton was  $2' 6\frac{1}{2}''$ .

New York, N.Y.

(Mr. Kennison's estimate of  $30\frac{1}{2}''$  compares very well indeed with the measured value of the baton which, Dr. Edgerton advises, is  $29 \frac{11}{16}''$ . — Ed.)

The Review is not published during the summer months following July. This issue, therefore, concludes Volume 55. Number 1 of Volume 56 will be published on October 27 and dated November. Readers who bind their copies are reminded that if they possess nine issues of Volume 55, their files are complete. An index to the volume will be ready on September 15 and will be supplied post free upon request.



E. A. Laboratories (10 contracts since 1919)

You can have confidence in a builder who receives 60 to 70% of his business from former clients.

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### INDUSTRIAL CONSTRUCTION

Alfred T. Glasett, '20, President

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## Insulation Stamina

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# ANHYDREX XX



Where your operations demand exceptional resistance to moisture, ozone, heat, and aging, ANHYDREX XX has the extra insulation stamina that means longer-life and trouble-free service. ANHYDREX XX specially compounded insulation will give you uninterrupted service year in and year out at 2,000-17,000 volts in underground, duct, or aerial installations.

Our research engineers aged ANHYDREX XX for sixteen weeks under the gru-

eling temperature of 250°F. (121°C). ANHYDREX XX retained its excellent electrical properties as well as its rubber-like characteristics. We subjected a vegetable oil compound to the same test and after only one week it lost its rubber-like characteristics. A heat-resistant compound had the same result after three weeks of testing. Both compounds became brittle and when bent cracked and crumbled. There is no better proof anywhere that

ANHYDREX XX is tops in high voltage insulation.

The next time you need high voltage cables be sure to specify ANHYDREX XX for economy, quality, and satisfaction. ANHYDREX XX Insulated Cables offer the kind of performance that reduces maintenance and replacement costs. For more complete information about what ANHYDREX XX will do for you, contact your nearest Simplex representative or write in care of the address below.

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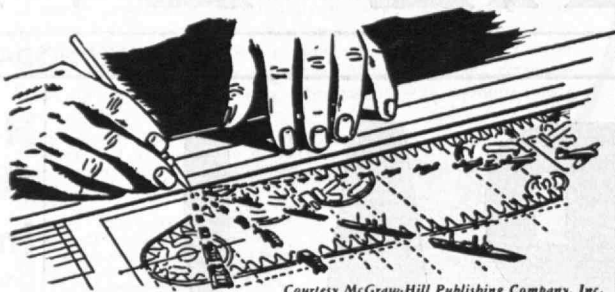
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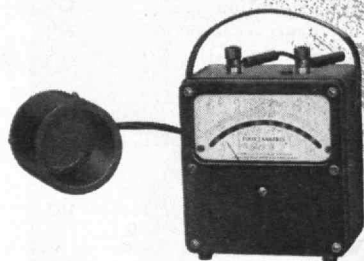
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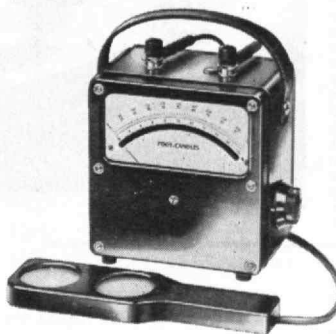
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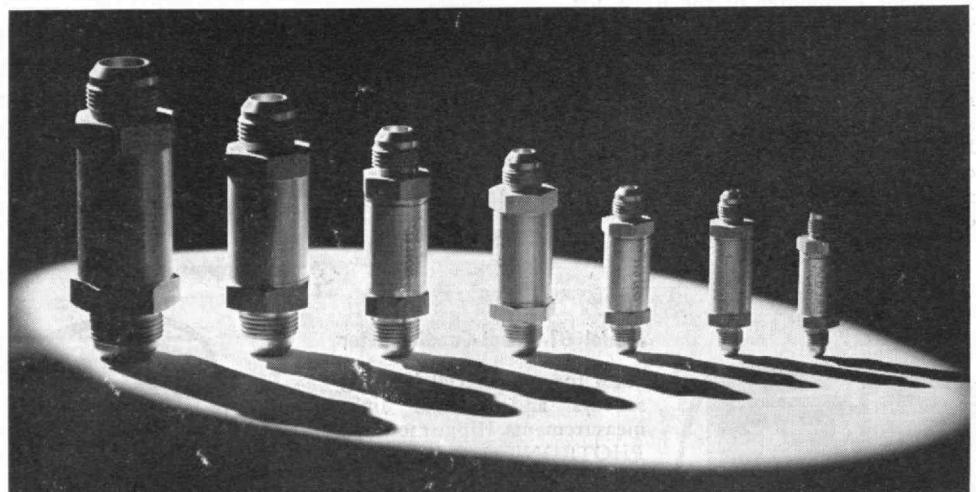
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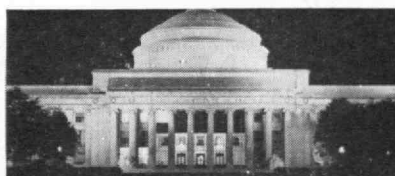
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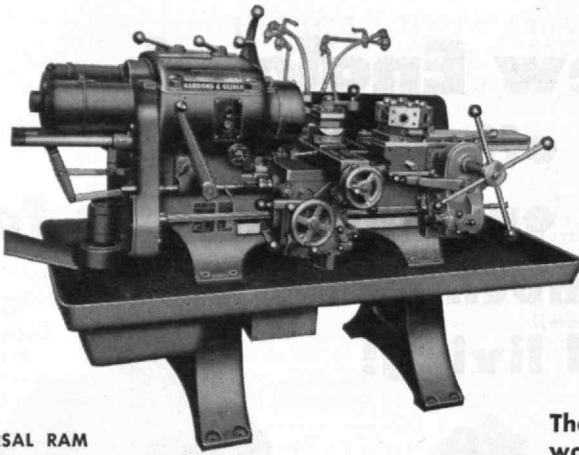




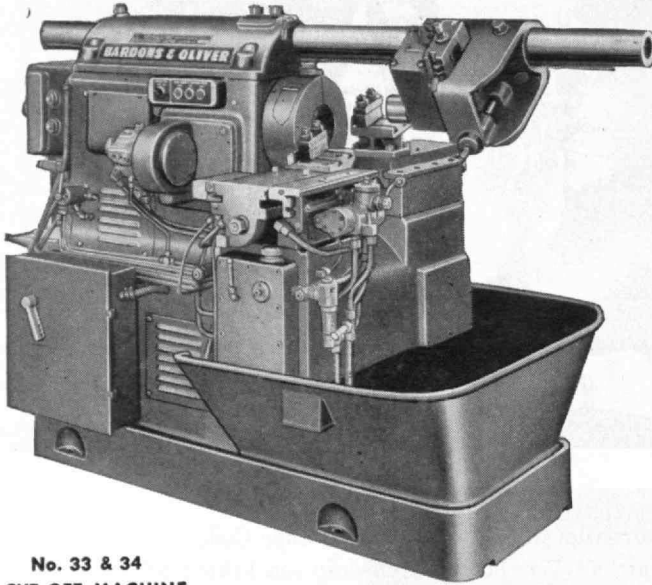
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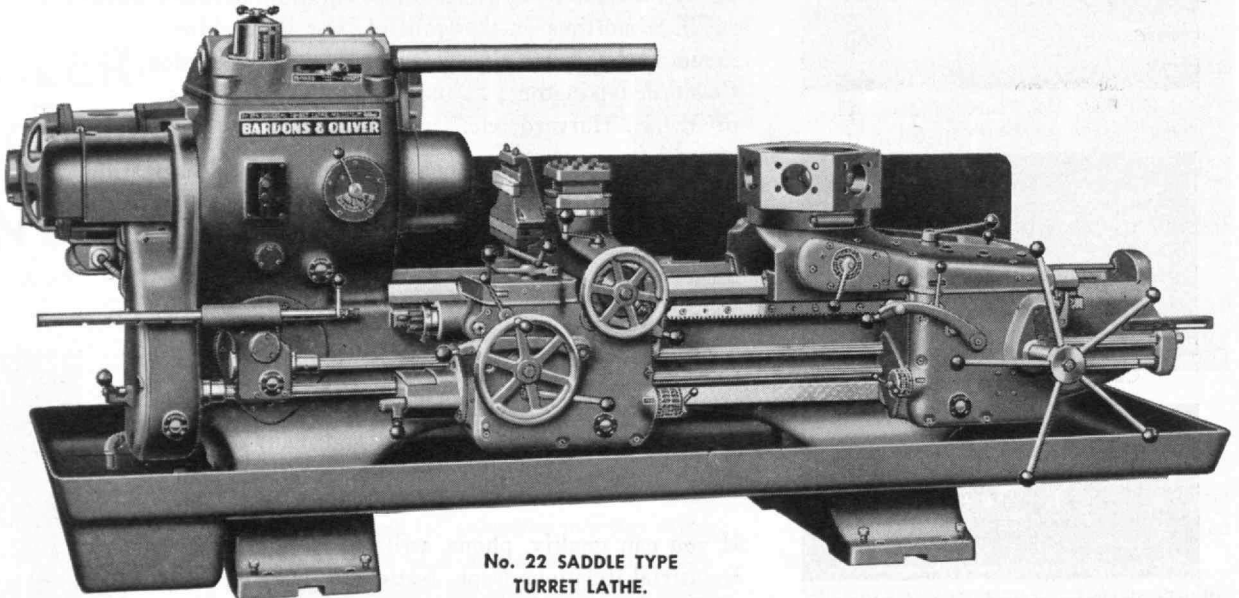
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THE NO. 21 AND NO. 22 SADDLE TYPE TURRET LATHES are exceedingly powerful and rigid for fast production on larger and heavier bar and chucking work. The hydraulic speed preselector, the power traverse to both the cross slide carriage and the saddle, the hydraulic collet chuck and bar feed in combination with many other eminent features make these machines leaders for fast production.

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# Another Cabot First ... in CANADA

Godfrey L. Cabot, Inc. is proud to announce the official opening of Cabot Carbon of Canada, Limited, and with it operation of Canada's first oil furnace carbon black plant, in the "Chemical Valley" of Sarnia, Ontario.

The operation of the Ontario plant will assure a continuous supply of quality oil furnace carbon black for the specific use of Canadian industry. Present carbon black requirements of the rubber industry will be met by the anticipated production of 25,000,000 pounds of carbon black annually, and will be expanded as required to meet the ever-increasing needs of Canadian rubber manufacturers. It is hoped that the continuous supply of oil furnace carbon blacks produced by Cabot Carbon of Canada, Limited will remove for all time the danger of critical short supply of this vital raw material as it existed in Canada during the last war.

Carbon black is a raw material vital to the production of rubber tires and other rubber products . . . an essential component of military vehicle and aircraft tires, tubes and other rubber parts. Synthetic rubber is particularly dependent for its optimum wearing properties upon the use of the oil types of furnace black now being produced by Cabot Carbon of Canada, Ltd.

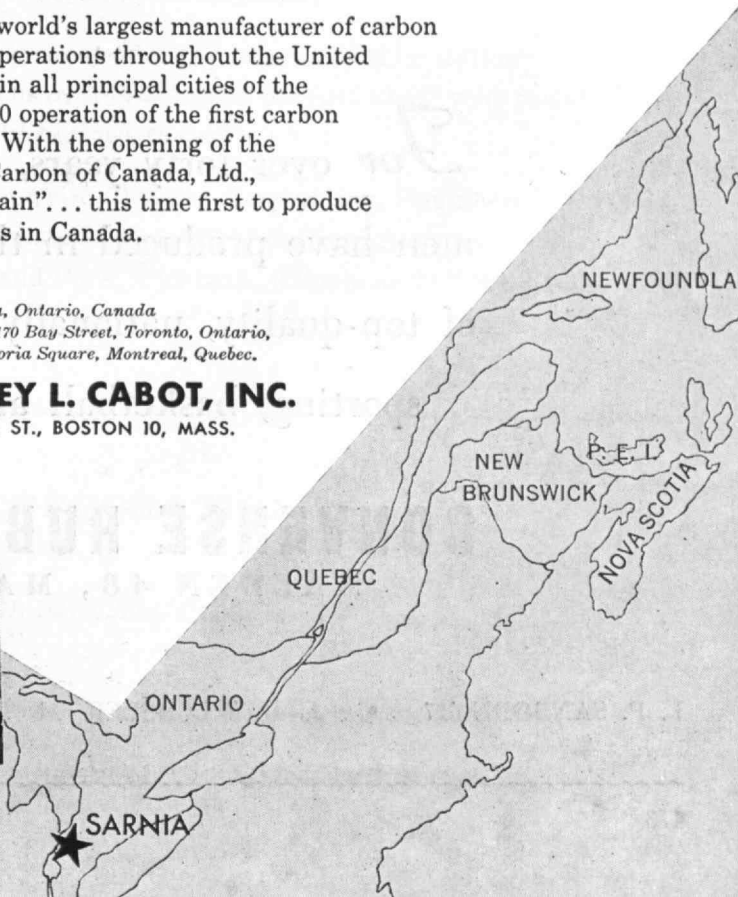
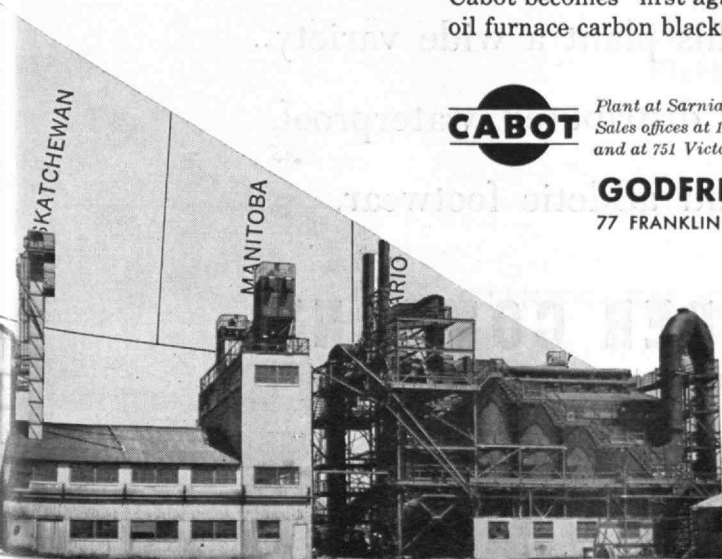
Godfrey L. Cabot, Inc., world's largest manufacturer of carbon blacks with producing operations throughout the United States and sales agents in all principal cities of the world, announced in 1950 operation of the first carbon black plant in England. With the opening of the Sarnia plant of Cabot Carbon of Canada, Ltd., Cabot becomes "first again" . . . this time first to produce oil furnace carbon blacks in Canada.



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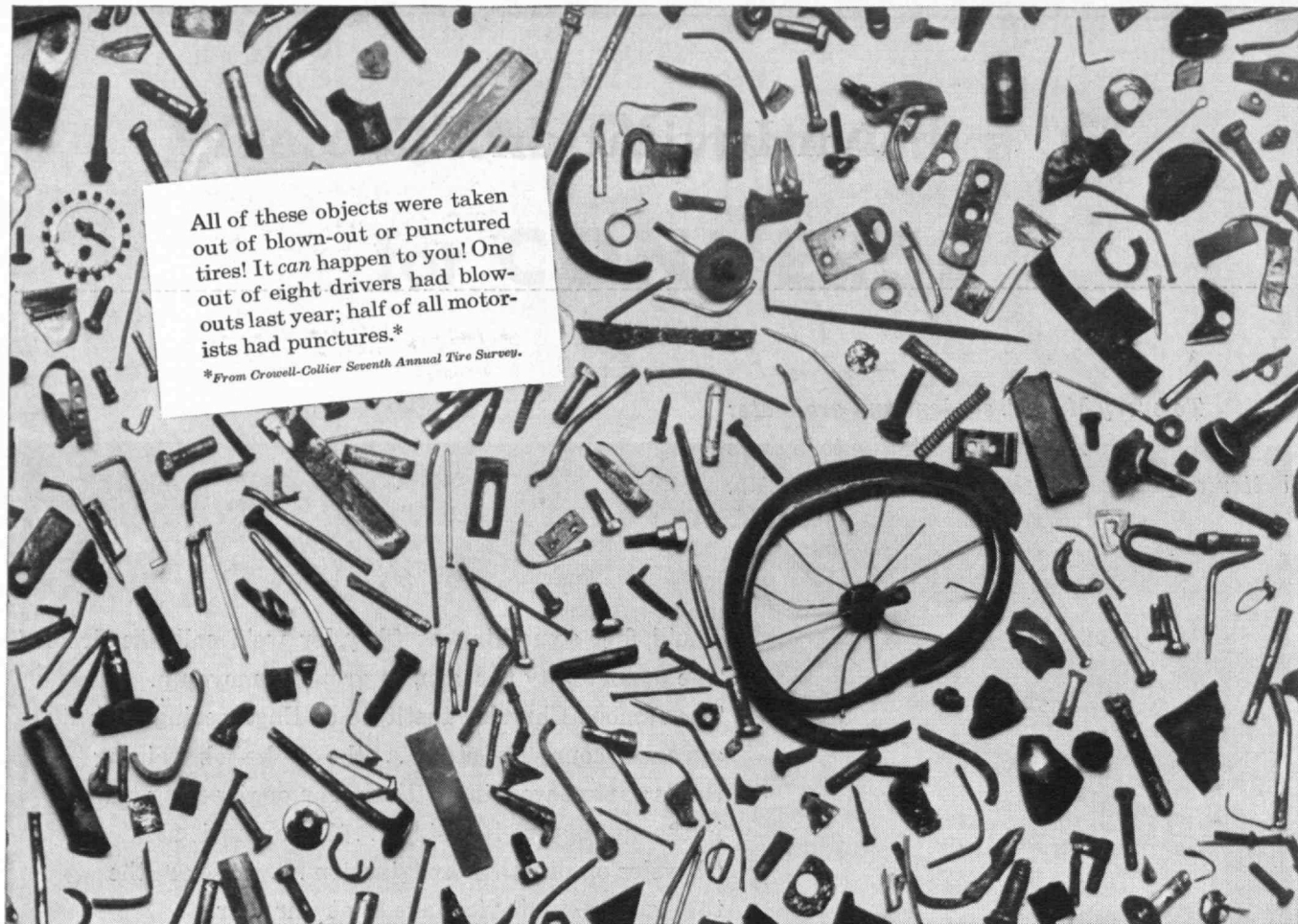
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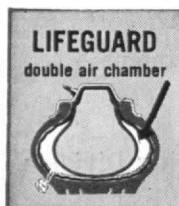


All of these objects were taken out of blown-out or punctured tires! It can happen to you! One out of eight drivers had blow-outs last year; half of all motorists had punctures.\*

\*From Crowell-Collier Seventh Annual Tire Survey.

## ALL THESE OBJECTS CAUSED BLOWOUTS OR PUNCTURES!

Protect against all with Double-chamber LifeGuard Safety Tubes!



**Safe against all blow-outs!** When something rips into a single-chamber tire or tube, you can have a blowout that will drop you to the rim in a split second.

But with double-chamber LifeGuards in your tires, you'll still have air in the *second* chamber. You will come to a safe, controlled, straight-line stop. Only the LifeGuard gives blow-out protection proved by 18 years and millions of miles of driving.

**Seal their own punctures!** Why should you change a punctured tire? When you pick up a nail or other small puncturing

object, just remove it and drive on. The puncture-sealant will automatically seal the hole without loss of air pressure.

**Cost less because they're re-usable!** You save 20% to 43% per wheel! Because this is the only protection against both blow-outs and punctures that won't wear out when your tires wear out. You spread the cost over 3 or more sets of tires, for 100,000 miles or more. Thus you save 20% to 43% per wheel.

You can use them in your present tires. Or have them installed when you buy your new car. You'll get full value for original equipment tubes. You'll hardly notice the small extra monthly payments.



**For the longest mileage,** the safest mileage, the most comfortable ride on wheels, remember: More people ride on Goodyear tires than on any other kind. Goodyear, Akron 16, Ohio.

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## NEW LIFEGUARD SAFETY TUBES

by **GOODYEAR**

LifeGuard, T. M.—The Goodyear Tire & Rubber Company, Akron, Ohio



H. Armstrong Roberts

*It is the common fate of the indolent to see their rights become the prey to the active. The condition upon which God hath given liberty to man is eternal vigilance; which condition if he break, servitude is at once the consequence of his crime and the punishment of his guilt.*

— John Philpot Curran

# THE TECHNOLOGY REVIEW

TITLE REGISTERED, U. S. PATENT OFFICE

EDITED AT THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

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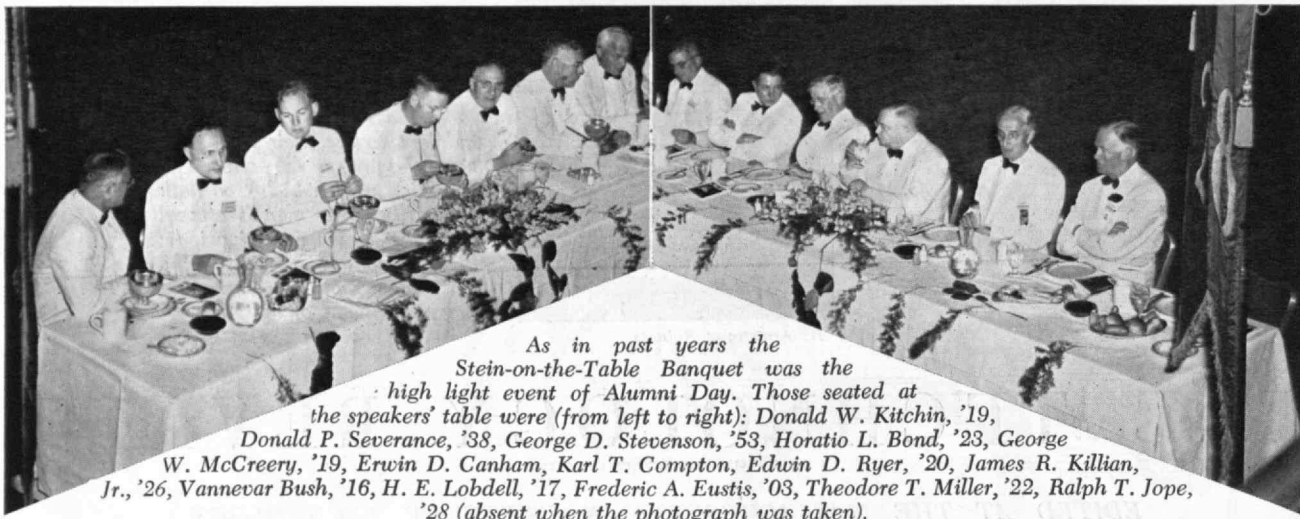
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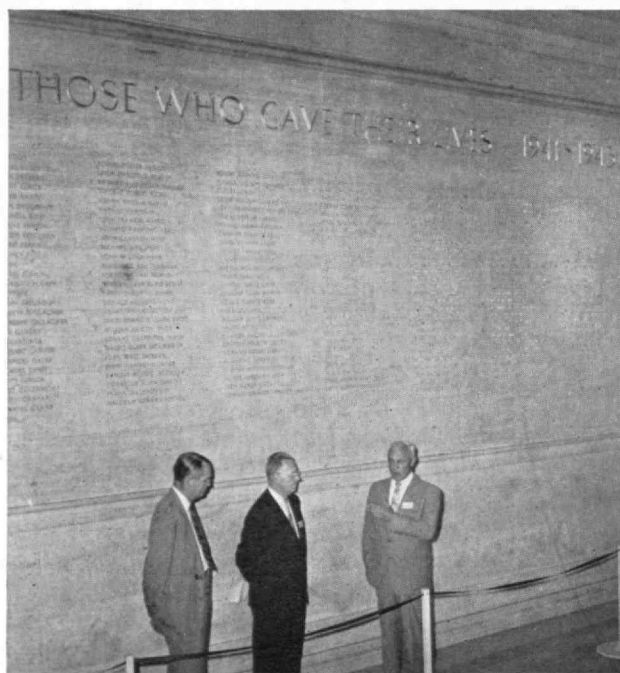
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# SELECTED EVENTS OF ALUMNI DAY, 1953



As in past years the Stein-on-the-Table Banquet was the high light event of Alumni Day. Those seated at the speakers' table were (from left to right): Donald W. Kitchen, '19, Donald P. Severance, '38, George D. Stevenson, '53, Horatio L. Bond, '23, George W. McCreery, '19, Erwin D. Canham, Karl T. Compton, Edwin D. Ryer, '20, James R. Killian, Jr., '26, Vannevar Bush, '16, H. E. Lobdell, '17, Frederic A. Eustis, '03, Theodore T. Miller, '22, Ralph T. Jope, '28 (absent when the photograph was taken).



Taking part in the dedication ceremonies of the World War II Memorial were (from left to right): John T. Rule, '21, Raymond A. St. Laurent, '21, and Karl T. Compton.



Wallace M. Ross (in dark suit) receives congratulations from George W. McCreery, '19, Mrs. Wallace M. Ross, and Mrs. Robert S. Reebe, daughter of Mr. and Mrs. Ross.



the speakers' table are (above, left to right) Mrs. Donald W. Kitchen, Mrs. George W. McCreery, Mrs. Edwin D. Ryer, Mrs. Karl T. Compton, Professor Rostow, (at right, left to right): Mrs. John B. Wilbur, Mrs. James R. Killian, Jr., Mrs. Erwin D. Canham, Mrs. Horatio L. Bond, Mrs. Frederic A. Eustis, and Mrs. Theodore T. Miller

While Alumni attended the Stein-on-the-Table Banquet, the ladies enjoyed their own banquet and address "Sophomores, Slide Rules, and Sophocles," delivered by Professor Elspeth D. Rostow. Seated at



# THE TECHNOLOGY REVIEW

Vol. 55, No. 9

July, 1953



## The Trend of Affairs

### *On Continental Defense*

**I**N December, 1952, as a part of an over-all review of United States objectives for national security, the then Secretary of Defense, Robert A. Lovett, appointed a special civilian committee\* whose duty it would be "to study certain aspects of the problem of defense of the North American Continent against atomic attack, and to make recommendations to assist the Department of Defense in meeting its responsibilities in this area." Secretary Lovett asked the Committee to concern itself primarily with (1) a review of the possibilities of an improved warning system, (2) a study of the relation of such a system to other major Continental defense measures, and (3) the formulation of recommendations on over-all policies and programs to achieve a more effective defense of North America against atomic or other airborne attacks.

The Committee submitted its reports to the Secretary of Defense in May, 1953. The summary report of Dr. M. J. Kelly rephrases, in general terms, the committee's specific conclusions and recommendations for reasons of military security.

The Committee noted that the Soviet Union is militarily capable today of a surprise attack on the United States which could cause large loss of life and major property damage, and possibly temporarily lessen the capability of the United States in a major war effort.

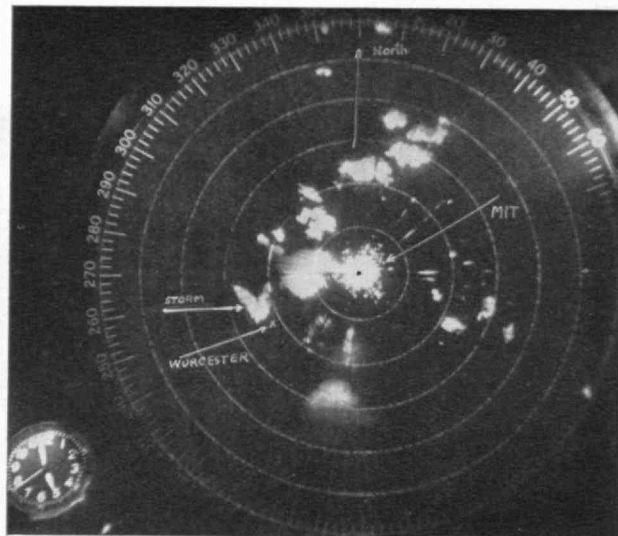
\*The membership of the committee included: M. J. Kelly, President, Bell Telephone Laboratories, Chairman; F. L. Hovde, President, Purdue University; S. C. Hollister, Dean of Engineering, Cornell University; D. C. Lauritsen, Professor of Physics, California Institute of Technology; R. E. Wilson, '16, Chairman of the Board, Standard Oil Company of Indiana; A. E. Raymond, '21, Vice-president, Douglas Aircraft Company; Walker Cisler, President, Detroit Edison Company. Representatives of the Army, Navy and Air Force, and of the Weapons Systems Evaluation Group of the Joint Chiefs of Staff, participated in the committee's work as Associate Members. Major General James McCormack, Jr., U.S.A.F., acted as Secretary of the Committee.

Emphasizing that all military measures must be assayed not only as to their value in the event of war but also as to their value in deterring war, the Committee pointed up the importance of continued development of a powerful United States atomic offensive capability, reasonably invulnerable to initial attack, as a vital, major part of the over-all defense system.

"The Committee urged the creation also of a continental air defense system much better than that which is assured under present programs, even though the limitations of known technology and the law of diminishing returns, as applied to national resources committed, may considerably restrict its effectiveness. In this connection the Committee expressed concern about the recent public advocacy of a program which would purportedly give nearly perfect protection against air attack. The Committee held that, so far as can now be foreseen, any such level of protection is unattainable and in any case completely impractical, economically and technically, in the face of expected advances in potentially hostile offensive capabilities. In the light of stern facts, the Committee emphasized that there can be no safety in the atomic age short of the elimination of war.

"After looking closely at the question whether a goal could now be set for a particular desired level of defense against air attack, in the usual terms of costs or target dates, the Committee concluded that a lasting answer on this point cannot be set down at this time. The Committee stated that the definition of such a goal can emerge only as concerted, organized attention is given to the total problem and advancing technology helps solve it. The Committee therefore framed its recommendations to outline a course of action for bringing purpose, vitality, and continuity to the program.

"The Committee found that the complex operations of continental defense against air attack suffer throughout from lack of clean-cut organization. Indi-



## Tornado Tracked By Radar

This extraordinary radar photograph shows the violent storm which caused the destructive tornado at Worcester, Mass., on June 9. It was taken at the Weather Radar Research Laboratory operating under the sponsorship of the U. S. Signal Corps at the Massachusetts Institute of Technology in Cambridge, a distance of more than 40 miles from the scene of the storm. The radarscope picked up the storm at approximately 4:58 P.M., EDT, a few minutes before the tornado struck Worcester. The full circle covers a span of 120 miles, each inner circle representing 20-mile spaces. The tornado is hidden in the white patch of the storm, which moved across Worcester in an east-southeasterly direction at a speed of about 40 miles an hour. The other white patches to the right and slightly above the Worcester storm are separate violent thunderstorms. The white dots surrounding M.I.T. in the inner small circle are radar echoes of buildings in Cambridge and Boston.

M.I.T. Weather Radar Research

cating some examples, the Committee recommended close attention to this weakness in the review of Department Defense organization now under way.

"The Committee gave particular attention to a program for improving present means of early warning of the approach of hostile aircraft, as a first essential of an effective active air defense and of a civil defense capable of avoiding a large loss of life. It emphasized also certain necessary improvements in equipment and procedures for intercepting and destroying hostile flights.

"While pointing out the need for constant attention to getting better results from present defensive means, the Committee noted that many of the problems involved in creating an adequate air defense can be answered in the long term only by the application of advancing technology. The Committee urged continuing strong support to a stable and sustained research and development program specifically established for this purpose. The Committee emphasized also the need for streamlining management procedures for research and development, so that there may be necessary flexibility in the face of the ever-changing threat, and maximum advantage may be taken of new scientific knowledge as it evolves.

"The Committee emphasized the mutuality of the defense problem as it effects Canada and the United States, pointing out the necessity for close integration of the defense measures of the two countries. The Committee also noted the connection between the defense of North America and that of other areas, particularly as the early warning network expands.

"The Committee urged an orderly program, directed from the top of the Department of Defense, for bringing about a widespread public understanding of the military aspects of continental defense."

While the above summary is, necessarily, lacking in the detailed recommendations which the Committee made, it is encouraging to know that a study of national defense against the atomic bomb has been made by such an outstanding group of leaders in the field of technology. Readers of *The Review* may derive special satisfaction from the fact that two of the seven members of the study group on continental defense are Technology Alumni.

## Tenth Anniversary

ANTIBIOTICS, of which penicillin was the archetype, came into use 10 years ago. Since then they have revolutionized the control of infection in medicine and surgery, thus saving countless lives. Meanwhile another, somewhat surprising, use for antibiotics has become established. This use is the feeding of antibiotics to farm animals to promote growth.

The growth-promoting effect of antibiotics was stumbled on in 1949, when a vitamin concentrate, contaminated with the antibiotic aureomycin, was fed to chicks, and was found to stimulate their growth much more than the pure vitamin alone possibly could. Subsequent experimentation showed similar effects with other antibiotics, and with other animals. As rapid growth is an important economic desideratum in animals raised for food, the feeding of small amounts of penicillin, aureomycin, or terramycin to growing chickens, turkeys, and pigs soon became established.

Antibiotic feeding is still empirical, as the reasons for the growth-promoting effect have not been clearly established despite intensive research. An explanation, postulated but not proved, is that farm animals may ordinarily suffer from low-grade infections or parasitic infestations that delay growth; and that the antibiotics may control such disease.

Another possibility is that the effect is nutritive. This explanation is suggested by experiments showing that antibiotics promote growth only when fed with a ration of inferior nutritive quality. Even if this is the answer, antibiotic feeding could still have economic value, as a cheap ration plus an antibiotic supplement might easily cost less than a more expensive, more nourishing ration.

The results of feeding antibiotics to animals have naturally aroused curiosity as to whether a similar relationship holds true for the human being. One recent study with human subjects used the antibiotic streptomycin. Since gross growth is not a feasible criterion with human subjects, this study employed measurements of nutritive status with respect to specific vitamins of the B complex.

Swallowing streptomycin was found to improve human nutriture with respect to the vitamin folacin.

This finding was postulated to result from an influence of the antibiotic on the bacteria that flourish in the intestinal tract. These intestinal bacteria, it was thought, may pre-empt some of the folacin the human being ordinarily obtains in his food. If such folacin-consuming bacteria were killed off by the antibiotic, more of the dietary folacin naturally would be available to the man. This same theory was extended to explain the results with farm animals, on the basis that folacin is a critical nutritive factor in ordinary farm rations.

When the human studies being cited were extended to the B complex vitamins biotin and niacin, the results were exactly the reverse of those seen with folacin. Swallowing streptomycin was found to worsen nutritive status with respect to biotin and niacin. Intestinal bacteria were again advanced as the explanation. Some of the bacteria that grow in the human intestinal tract are known to generate certain vitamins when grown in cultures in test tubes. If they have a similar action in the intestine, killing them off could make it necessary for the host to consume more of these vitamins with his food, or else suffer a vitamin deficiency.

At this point it becomes clear that the theories explaining nutritive effect of antibiotics by action on intestinal bacteria do not assume that such microbes are wiped out and the gut made sterile. Rather the assumption is that some forms of bacteria are favored, others suppressed. The question is, are such shifts in bacterial population toward the beneficial, or toward the baleful, side?

These explanations are all speculative; but one objective fact emerges. The adverse nutritive effects observed in the feeding of antibiotics to human beings outweighed the favorable effects. Therefore, administration of antibiotics via the human intestinal tract (even local application to mouth or throat infections in such a way that some of the antibiotic may be swallowed) cannot be indiscriminate. Possible adverse nutritive effects must always be considered.

## ***Fatigue and Fracture of Metals***

FOR 5,000 years man has had experience of metal. Considerable though this period is, if judged on an historical rather than on a geological basis, it has proved all too short for the determination of the major chemical and physical characteristics of even that small group of metals used in engineering. This lack of knowledge is particularly conspicuous with regard to the property, now called "fatigue," whose very existence was not recognized in this country until 1849.

One hundred and three years ago a memorable meeting of the Institution of Mechanical Engineers was held in Birmingham. Robert Stephenson presided, and McConnell advanced his explanation of the failure of railway axles. This is equivalent to saying fatigue was accepted as a characteristic of metals subjected to fluctuating loads. In 1950, another meeting was held, this time at the Institute with Jerome Hunsaker, '12, in the Chair. Its purpose, *inter alia*, was to discuss the behavior of metals when subjected to stress variations. Now more than two years after the event, the papers then given, amounting to 14 in all, have been published in book form. This therefore might provide a suitable opportunity for reviewing

not only the work\* itself, but the progress which has been made in a century of thought and investigation.

When realization of the existence of the fatigue of metals was both novel and confined to the few, there was no agreement as to the physical changes which came about as a result of cyclic stresses. Some, and probably McConnell himself, deceived by the appearance of the characteristic fatigue fracture, thought that the metal had become crystalline, and therefore brittle—the fact that all metals, whether ductile or brittle, are made up of crystals, was not then generally recognized.

Now, more than a century on, what is the answer to the question—"What is fatigue?" In vain one looks for it in this M.I.T. Symposium. This, however, is not a reproach. It is merely a statement of fact. It is true that one of the authors described the fatigue failure of ductile metals as involving localized transitory plastic flow, work-hardening and cracking. This was not debated, but appeared to be generally acceptable, though in the light of recent work of Wood and Head and of Forsyth, it might now be regarded as an oversimplification.

This M.I.T. Symposium consists of 14 papers by authors, mainly American, though two British and one Swede have contributed. Few deal with the fundamental physics of fatigue. Some are concerned with methods of delaying its incidence. There is a paper on the fatigue problem in aircraft structures, another relating to it in ships, another in machinery, and so on. These contributions have merit, and perhaps this is something of an understatement. Their authors, however, regard fatigue as inevitable as death itself, and, in the main, as being equally mysterious; but like the medical practitioner, they believe they know of ways of delaying ultimate dissolution.

For the aircraft engineer concerned more with his specific structural or mechanical problems than with those of metal physics, there is no doubt that there are for him two papers of greater interest than the rest—"The Fatigue Problem in Airplane Structures," by H. L. Dryden, R. V. Rhode, and P. Kuhn (respectively director, assistant director and a member of the Staff of N.A.C.A.), and "A Review of Cumulative Damage in Fatigue," by N. W. Newmark, Research Professor of Structural Engineering, University of Illinois.

The first is a workmanlike exposé of the aircraft fatigue problem as it is, with some indications as to how it is likely to develop. With clarity, the authors state what is known and what is not. Further, they indicate the steps which the N.A.C.A. has taken or is taking to fill the gaps. Truth to tell, the reader will find little in this paper which will be of practical use to him. He will, however, not come to the end of his reading without concluding that the perplexities of fatigue in relation to aircraft are clearly seen by a leader not only with vision, but with the resources necessary for their investigation.

Professor Newmark's judicial review of such evidence as is available to test the veracity of the "Cumulative

\*"Fatigue and Fracture of Metals." A Symposium held at the Massachusetts Institute of Technology, June 19-20, 1950. Edited by William M. Murray. (John Wiley & Sons, Inc., New York. Chapman & Hall Ltd., London.)



lative Damage Rule" so attractively enunciated in 1945 by Miner, can be read with interest. Should the reader be able to approach this controversial subject without bias (and in doing this he will be somewhat exceptional) he will surely return a verdict of "not proven."

Finally it can be said of this excellently reproduced symposium that while it contains very little indeed which is new, the authors have given workmanlike reviews of current ideas on those aspects of the fatigue problem with regard to their special knowledge.

## Nothing

AMONG the more direct connections between the physics laboratory and the consumer is one that is based on nothing — nothing, that is, but scientific knowledge. If called on to give a few examples of the use of high vacuum in industry, the average layman might mention the electric light, the vacuum tube, and come to a sudden halt. But a host of materials, including such diverse items as metal castings, antibiotics, toys from the five-and-ten cent stores, and various chemicals pass at one stage or another of their production cycle through a high vacuum.

Normally, a high vacuum is one that has been evacuated to about one-millionth the pressure existing under sea-level atmospheric conditions. The specific requirements of a process, however, frequently lead to the use of pressures well removed from this rough datum. The industrial advantages of a vacuum are not always the same. In some cases, it is the virtually complete removal of oxygen that is important. In others, it is the lowering of the temperature of vaporization that is desired — generally, but not always, the boiling point of water.

Under sufficient vacuum, materials can be freed of contained water quickly at room temperatures, and even when frozen solid. The palatability and high-vitamin content of frozen orange juice depends on concentrating the heat-sensitive juice at low temperature and in the absence of air, although economic considerations require that the vacuum be held no "higher" than necessary, and is currently held at about 10 millimeters of mercury. Streptomycin and many other biological products, such as vaccines, are dried under vacuum for similar reasons.

The use of molecular stills to recover vitamins from fish oils, and to produce certain plasticizers and fatty acids has become a good-sized industry, now about 20 years old. Dependent on high volume, high-efficiency vacuum pumps for its existence, it came into being after the development of the molecular pump in 1913 and of the mercury vapor pump in 1916.

One of the more recent fields of application for industrial vacuums is in the deposition of vaporized metallic coatings. Applied in this manner, a wide variety of metals and metallic salts can be made to adhere, in very thin films, to almost any material that can be degassed in the vacuum chamber. Prominent in this list are plastic articles, paper, and even textiles. Although most of the applications have been to base materials that could not be covered by metal in any other way, there is evidence that the process may be

competitive, in certain fields, with electroplating, in which metals are deposited on metals.

The coatings are very thin — frequently less than one-hundredth as thick as the thinnest coatings which can be commercially plated — yet are brilliant and lustrous. Thus, material costs, even when evaporating precious metals, can be kept low. The coating can serve as a base for electroplating, if desired. If the casting or molding to be treated does not already have a smooth surface, a coat of lacquer is frequently applied first. After the coating is deposited, another coat of lacquer, clear or tinted, is put on to protect the metallic film from damage or tarnish.

Although every metal and many salts can be vaporized and deposited by this method, aluminum is used in about 95 per cent of the applications. It is low in cost, has a low boiling point, resists tarnishing in air, and is highly reflecting. A pound of vaporized aluminum can cover more than one-half acre of surface.

Another large-volume field is in the refining and sintering of metals which are extremely reactive at elevated temperatures with one or more of the atmospheric gases. During World War II thousands of tons of magnesium were produced by the ferrosilicon process under pressures as low as one micron. Calcium, tantalum, titanium, zirconium, and molybdenum are other metals that are frequently processed under vacuum. Such metals can now be cast in vacuum furnaces which operate continuously. Raw material is charged and cast ingots are removed without cooling the crucible or breaking the vacuum in the melting chamber.

## Mysterious MSG

A NEW food seasoning has joined the traditional salt, spices, and herbs in the flavoring of American foods. This novel seasoning bears the sonorous chemical name "monosodium glutamate," but is generally known by its initials, MSG. Although this type of seasoning is fairly new to the Occident, it has long been used by Orientals to enliven their dietaries, which otherwise would be bland in flavor because of containing little animal protein. The chemical basis of MSG and related food seasonings is protein breakdown products — amino acids or peptides — prepared by hydrolyzing proteins, usually those of vegetable origin. The familiar soy sauce that appears on the tables of every Chinese and Japanese restaurant is an example. An Occidental equivalent is the vegetable bouillon cube.

Soy sauce and bouillon cubes are heterogeneous and variable mixtures. Monosodium glutamate, however, is the sodium salt of glutamic acid (an amino acid) in pure crystalline state. It has neither the dark color nor the pronounced aroma of soy sauce or bouillon cubes. MSG is manufactured from protein residues of the wet milling of wheat or corn, or from similar residues from the making of sugar from sugar beets. These vegetable proteins are hydrolyzed, then neutralized, and glutamate is separated from the liquor by crystallization. Washing, centrifuging, drying, and screening then prepare the MSG crystals in a high degree of purity. The entire process is reported to require a month.

(Concluded on page 534)

# Democracy Is Not Enough

*Our Loyalties Must Reach beyond Manifestations of Material Progress,  
to the Spirit of Truth, to Belief in Worth of the Individual,  
to Ideals and Ideas, to Righteousness and Integrity*

By FREDERICK M. MEEK

BACCALAUREATE ADDRESS

THE survival of early American settlers depended on reading correctly the signs of the life around them — detecting the often unseen approach of an enemy, on two feet or on four; knowing whether the soil would yield a crop; deciding whether today's spring would still flow, come August; following the tracks of animals needed for food and clothing; reading the sky, whether the morrow would bring sunshine or storm. If the settler read the signs correctly, he and his family survived. If he failed, they perished.

Sometimes the skilled ability to read these external signs was not in itself sufficient. Daniel Boone could read the external signs as well as any one in America. But when a new family settled 50 miles from Daniel's cabin he came home, picked up his gun and said to his wife, "Come on! We're gettin' crowded. We got to be movin'!" In the coming of neighbors, Daniel Boone did not read the signs of a new America — an America greater and more populous than anything he had ever known, an America and a world in which no man could finally escape from his neighbors, nor they from him. What are the signs in our day which are there to be read, and upon whose correct reading our future depends?

It is highly questionable that you and I in our lifetimes will ever know a period of freedom from world tension. Apparently we are to live and do our work in a long-term crisis era, the end of which no one can forecast. Faced with this prospect we seek the deeds and the understanding which will enable us both to survive, and to fulfill our political purpose and our destiny.

We who seek thus to act and to live, are the citizens of a democracy. But our common understanding of what democracy means is far too circumscribed. We are so accustomed to the word "democracy" that we use it almost as a shibboleth; and we confuse its by-products with its true meanings; we confuse the pursuit of our own personal comfort and tranquillity with its primary purpose; we confuse its devices with its inner life.

Democracy is more than a standard of living or a system of free enterprise; it is not simply a method of operating the institutions of government or a technique of voting; it is not a guaranteed freedom (often confused with license) to do as we please. And certainly democracy does not center primarily around military power.

Yet in a democracy we have a profound concern for free elections and for the institutions of government; we are interested in the standard of living and in how it is achieved; and at times democracy calls military power to its aid. But when we allow secondary aims and auxiliary devices to be treated as primary ends, inevitably democracy's values and true meanings are obscured, and may be lost.

Above all else we are enormously concerned with democracy's peril in today's world. And we are lending our efforts on a scale never known before in a so-called "peace-time," to meeting the peril by becoming militarily strong — we need it. I do not argue the necessity or the lack of necessity of military power. But I do affirm that over-absorption with this one kind of defence and with this one kind of



In baccalaureate services held in Walker Memorial, those participating were (left to right): Karl T. Compton, E. Francis Bowditch, Reverend Frederick M. Meek, who gave the baccalaureate sermon, and President James R. Killian, Jr., '26.

potential attack, against those who oppose and bitterly hate our way of life, is a mistake. It is a mistake that could bring us defeat even in the hour when it would bring us a victory of power.

Why do I say this? Because we can never win democracy's victory over those who are opposed to us and our way, simply by pitting power against power. A blow, no matter whether it be delivered by a gun butt or through atomic fission, never destroys an idea; and a victory of military power can never eradicate a false philosophy of life, even through the extermination of the false believers.

Democracy is primarily a way of living based on a particular understanding of the character of life. Democracy has very definite convictions about the meaning of life, centering in man—who he is and who he can be. And democracy's final protection, both offensively and defensively, depends upon the accuracy of the character of this understanding, and upon our devoted commitment to it—both in our understanding—both in our deeds as citizens, and in our witnessing among the nations of men.

Today's great peril comes to focus in a sharp conflict between two very different understandings of the character of life and of man. And the resultant deeds of these differing understandings are meeting, head-on, in the world scene. Our democracy is faced by men who live by passionately held convictions about the impersonal nature of life, and about the impersonal nature of man. Man is regarded as an expendable useful commodity, to be used or discarded with as little personal compunction as is felt in using or discarding any other natural resource—gypsum, steel, or uranium.

In more recent years our enemies, in their believing hate and fostering their false interpretations of life, have been setting men's hearts on fire by promises of freedom and of the expansion of life—promises which their hate and their interpretations of life can never bring to fulfillment. Nevertheless,

more human beings have come under the dominance of these false interpretations of life than have been won to any other interpretation of life in an equal period in the world's history. We are confronted by one of the most aggressive missionary movements in human experience. Therefore, we are faced with initiating and carrying on a sincere believing movement of interpretation of our own way both at home and on a world scale. Our future, for its safety and its fulfillment, lies in ideas, in ideals, and in the dependable character of our understanding of life. And at present, left behind as we are in this current struggle for political and ideational supremacy, we need ever to remember that "A man with an idea, even a false idea, will always beat a man with no idea." Because we have been laying aside our own convictions about *our* Great Idea, we have been losing out. No amount of foreign aid or mercantile exports, or no military might, can ever take the place of our Great Idea.

Not long ago 408 students (most of them engineering students) who were graduating from a Chinese university wrote to Mao Tse Tung on the day of their graduation:

Our revered and beloved Chairman, Mao: It has long been our fond hope to follow your blueprint of a new China and contribute our share to the realization of the people's bright future . . . That day has come. How happy we are to let you know that we have been studying and preparing ourselves for our glorious tasks. The masses of students are saying we are prepared to devote ourselves unreservedly to the people's great cause. Behold new China is ours today! (Can there therefore be room for the consideration of personal interests and difficulties?) So in the past year we have looked upon our studies as a duty imposed upon us by the people. Our enthusiasm burns like fire. We are thrilled by the prospects of reconstructing our mother country.

Do we have a matching moving loyalty to the democracy of which we are part, so that personal individualistic success is lost sight of in a commanding loyalty to something far greater than ourselves? Certainly we are faced with the necessity of arming ourselves with our own primary convictions and beliefs about our democracy, so that the compulsion of these beliefs will again work their way with us.

The average citizen's devotion and loyalty have been circumscribed into a little front lawn universe, summed up in immature boasting that we have the best of everything, and that "Nobody's going to tell us what to do," all buttressed by statistics about per capita possession of television and bathrooms and automobiles. We have yet to come to terms with the fact that a man's enthusiasms and devotion can and must reach beyond the possession and the lines of a new automobile, or the clarity of the picture that he gets on a 21-inch television screen. I shuddered in fear and in



*Members of the graduating class march down Memorial Drive and enter Walker Memorial for the baccalaureate service on June 11.*



humiliation this past week, when I contrasted the character of the devotion of those Chinese students with the implication of a sentence spoken seriously in a young valedictorian's address, "Success," said this person, "has taken on for us in America an almost sacred quality." That is, we bow down and worship material achievements. Of all idols, such success is most undependable.

Our most commanding loyalties must reach beyond any manifestation of material progress, to ideals and ideas, to righteousness, and integrity and the spirit of truth. And until these capture our devotion and our loyalty, our way will grow weaker rather than stronger. But such enthusiasms and such loyalties are peculiarly unsuited to today's pressure toward conformity. While democracy exists within the defined limits of freedom, in thought and experience it has not compelled uniformity. Democracy, by its genus, will die when a tight conformity of experience and thought is established, because democracy gives to men a freedom of expression for their lives which is never to be found in the conformists' theories of government and of society. If our democracy is to live, we must make room for the nonconformist, rather than to seek to extinguish his spirit. Actually the only reason why we have our freedoms is because there were nonconformists. The nonconformists brought us our Declaration of Independence, our Bill of Rights, the pattern of our Constitution, our advances in political and social experience.

Meanwhile the pressures toward conformity come from high places and from low. It is assumed by many that if we do not view life through the peephole of some mind which has at its control a raucous voice shouting from behind the shatter-proof glass of Congressional immunity, demanding a surrendering conformity to its peephole view, then we are suspect. But new ideas, fresh ideals, broadened understanding, deeper insights have always come from men who were nonconformists. And in a day of peril when the need for the nonconformist has never been greater, to attempt to wipe out these sources of political and social advance is the most destructive action that can be taken by any group of common citizens or self-constituted leaders.

### ***A Better Tomorrow***

This takes us into what some call "dangerous territory." We can never understand democracy, and we can never embody democracy in life and practice, until we understand that at heart democracy is a revolutionary faith. We Americans who were born in a revolution, and who stand in the tradition of the Judeo-Christian faith (the most revolutionary faith mankind knows) have become afraid of the word "revolution." We have let our enemies take the word over and use it

for their nefarious purposes, while we have given the appearance (and sometimes the assurance) of being unwilling to assist the seeking millions of the so-called colored races, as they are ready in this century to carry out their own revolutions, which could bring them into the kind of freedom we enjoy. Nothing has tended to destroy faith in democracy more surely than this unwillingness to acknowledge that democracy is always a revolutionary faith, seeking a better tomorrow.

Thus one of the central ideas in democracy, with its emphasis upon freedom and the seeking of truth, is the fact that democracy is never a finally defined way of life. The structure and the way are never complete. It is a sound word that "the present is never good enough to be the final way of life." A democracy that accepts the fact of man's infinite worth, and that provides an arena in which the restless quest at the heart of human life for truth is carried on, can never let itself rest permanently in any present. If in any hour it determined in self-satisfaction never again to move, in that same hour it would be sentencing itself to future extinction. We always have those who, in the name of the highest motives, of course will seek to persuade democracy to share in such a program of political and spiritual suicide.

Thus, consciously or unconsciously, in all that we do, we of a democracy by our living are giving answers to such basic questions as, "What is man?" "What is life?" "How is life to be lived?" But these questions are more than political or economic or social. When the economic and political answers have been given, these same basic questions still remain to be answered, "What is man?" "How is life



*Women members of the Class of 1953 who took part in commencement exercises are (in usual reading order): Alice R. Schomburg, Joan M. von Fleckenstein, Janet D. Zachs, Patricia A. Jackson, Carole S. Littlejohn, Ann C. Wilfert.*

to be lived?" "What are the purposes of life?" "What is man's worth?" "What are man's rights?" These questions are never answered satisfactorily until an inclusive religious answer has been given, which recognizes not only man and his wants and desires, but also and more important the Creator God and His purposes and His relation to man.

Here we come upon one of democracy's primary convictions, and it is our Great Idea, a belief in the infinite worth of man, and in rights which come to man because he has this worth. This worth which democracy ascribes to man is not something which a state confers upon us men, and which it can, therefore, take away from us when it so desires. Our democracy began with a belief that man's worth and his consequent rights, come to man because he has worth in the sight and purpose of the eternal God. (We forget, today, that some one like Thomas Jefferson believed so profoundly in encouraging this kind of understanding within the rising young democracy, that out of his own private pocket he supported home missionaries to what is now the state of Illinois — a forgotten footnote in the life of Thomas Jefferson.)

This primary belief in the essential dignity and worth of all men has a background which it is very necessary to understand. We do not find this particular belief among the Greeks or the Romans, nor among the Egyptians nor in the Orient. But when we turn to Palestine where the Hebrew and Christian faiths root, there is a striking contrast. This striking contrast is made vivid in an old story from the Book of Kings.

Ahab the King of Israel coveted the vineyard of one of his subjects. He offered to purchase it, but Naboth the owner refused to sell. It was family land, having come down over the generations to him, to his fathers and his forefathers. Thus the King's desire was thwarted. The common man had rights so well recognized that not even the King could step in and override them. And in those days the King was a man with absolute power in the military, the political, and the civil fields. But in that little country of Palestine the monarch's power was restrained by the recognized inalienable rights of the common man.

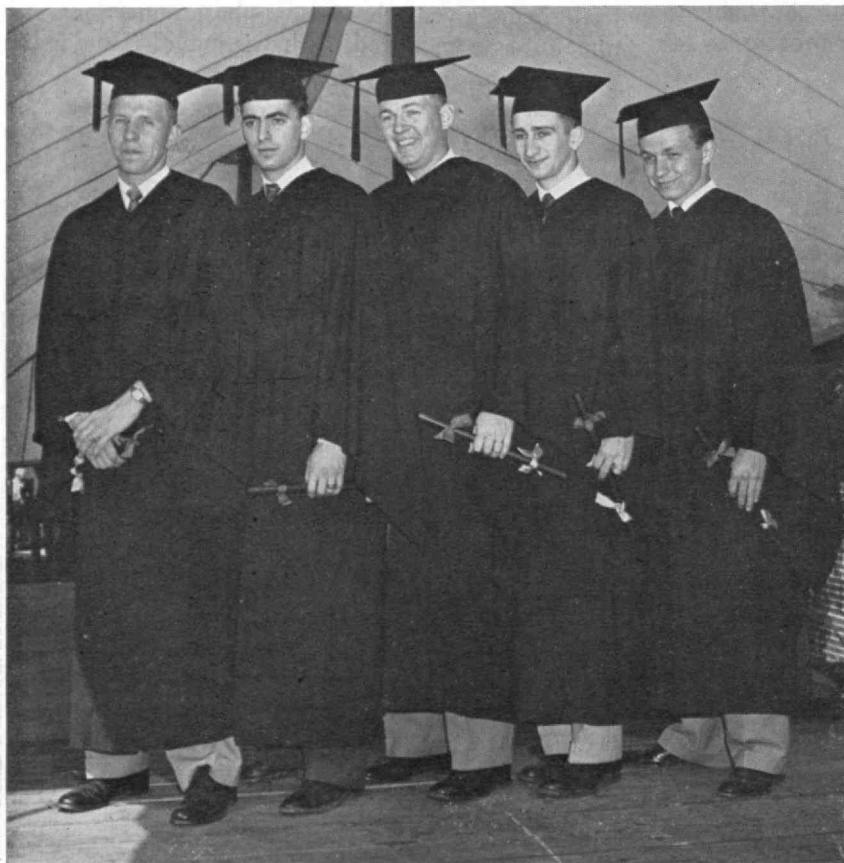
The King, Ahab, had married a foreign wife, Jezebel. The idea that any citizen, any common man, should have rights which the King could not override was to her, nonsense. Therefore, without consulting Ahab she ordered Naboth to be stoned to death. After the murder she told the King that he could now take possession of Naboth's vineyard, even as he desired. But it was not so simple as that. There was an outburst of public indignation, and in the very hour when the King would have taken possession of Naboth's vineyard, the religious man Elijah, met the King and addressed him in words that in any other land would have brought his death, "Thus saith the Lord, 'Hast thou killed and taken possession? In the place where the dogs licked the blood of Naboth, there shall dogs lick thy blood, O King, even thine.'" The King, hearing the words of Elijah, the servant of God, went home desperately afraid and never laid hands on the land. The records says, "And it came to pass that when

Ahab heard these words he rent his clothes, and he put sackcloth upon his flesh and fasted."

It has been accurately pointed out that this story has no parallel in the literature of any other people. Meanwhile this Old Testament theme of the rights and the worth of the common man, and of God in effect guaranteeing them, was part of the inheritance that came into the Christian faith. In the Christian faith there came alive the point of view that human personality mattered in the sight of God more than anything else.

It is this Great Idea of the worth of the individual, coming into our political institutions directly from the Judeo-Christian stream of religious thought and experience, which our enemies oppose so violently. Their system is erected on a belief that a man does not have any such worth or such rights. And when we, in our democracy, attempt to separate our belief in man's worth and his rights from its religious roots, we leave ourselves denuded of what is our greatest protection and guarantee; and eventually we find that there is nothing to prevent men in quest of power treating us as means to be used and manipulated, to be discarded at their

(Continued on page 532)



Officers of the Class of 1953 are (left to right): John R. O'Donnell, Second Marshal, George J. Fuld, Third Marshal, George D. Stevenson, President, Mark B. Schupack, First Marshal, Vinson W. Bronson, Jr., Secretary.

# Our Universities —

## A Bastion for America

### *The Current Wave of Anti-Intellectualism Retards Us in Fulfilling Our National Needs and Goals*

By JAMES R. KILLIAN, JR.

#### VALEDICTORY ADDRESS

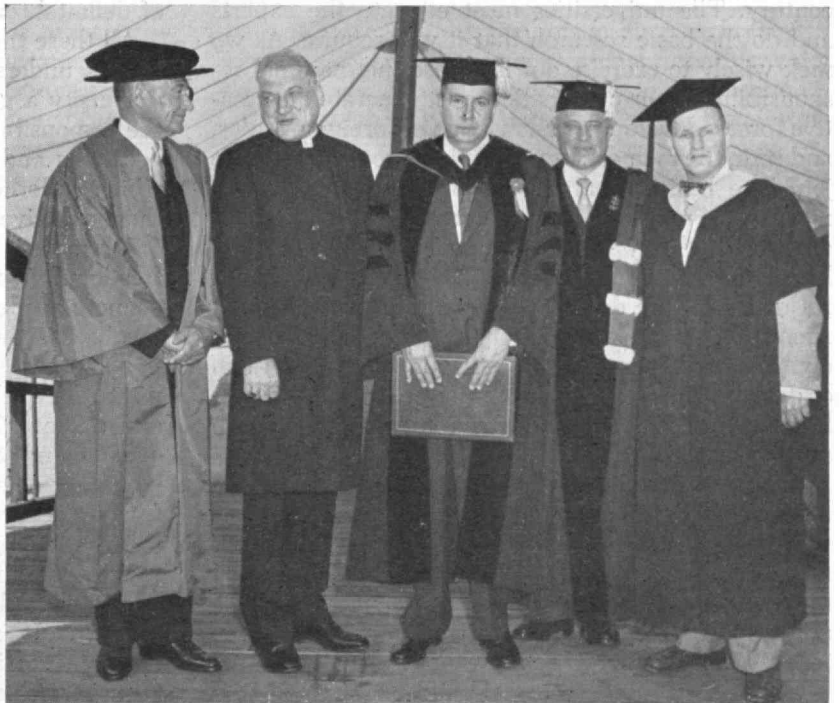
OUT of the context of contemporary events and in the spirit of fellowship and ideal aims which mark this institution and our exercises today, I venture to express another hope — a hope that all of us may both encourage and experience a new era of good feeling and good will, an era free of the present miasma of accusation and suspicion, of inquisition and deprecation which today envelops us all.

By each of us adding his small increment, we may help to swing the balance. We can help by demonstrating good will ourselves. We can help by embracing every opportunity to high light the need for confidence in each other and our dependence upon each other. We can "accentuate the positive" more and dwell less on the defects and weaknesses of our fellows and our enterprises. We can stress how much, rather than how little, we have reason for pride and confidence in our neighbors and in our institutions. We can insist that building America cannot be achieved by tearing Americans down.

In this spirit of building up rather than tearing down, I speak today about the position of our universities and colleges, stressing not their blemishes but their splendors, not their defects but their achievements. In the 1930's this nation witnessed an enflaming attack on business and on the "economic royalists." In the 1950's we see the attack shifted to education and the "eggheads." These deprecations exhibit a common lack of discrimination and a common search for whipping boys. Both may be characterized as tearing America down rather than building Americans up.

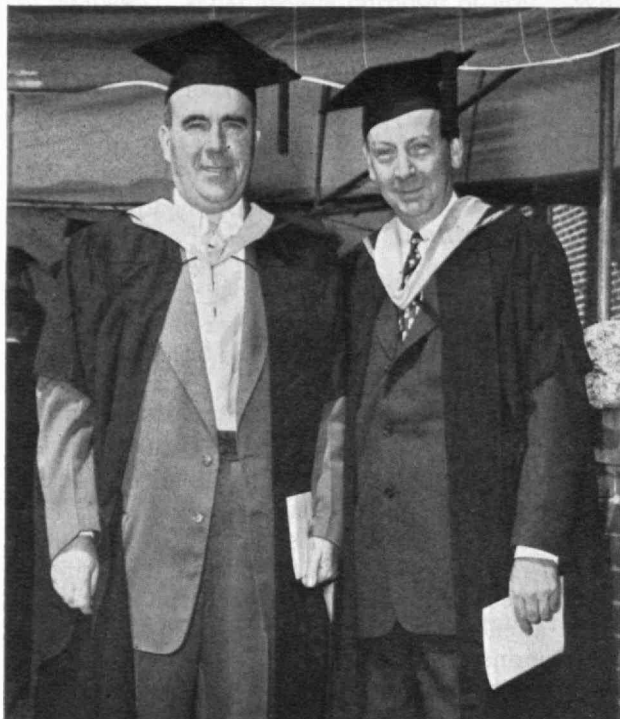
The National Manpower Council, in its recent report to the President, urged that the institutions which train our scientists and our professionals be strengthened and that it be our national policy to create a more favorable climate of opinion for intellectual work and the reward of intellectual achievement. Our nation's defense, our progress, our social and economic well-being depend to a great extent on a handful of specialists and professional men and therefore upon the universities which must educate them.

The current wave of "anti-intellectualism" retards us in fulfilling these national needs and goals. The current spate of inquisitions and special legislation make it more difficult. Their net effect is to dampen creative activity, to accentuate the negative, and to divert attention from the massive corporate loyalty and soundness of our institutions. Certainly there are occasional notes in the academic eye, but they shade into insignificance when we see Alma Mater's wholesome, robust, full-length figure. What we have to fear today is not public scrutiny but the attitude that looks solely for the bad and ignores the overwhelmingly greater part which is good. It is important that this be said and understood. Never have our universities been more productive or carried heavier responsibilities for the nation or yielded a higher return to society or been more of a bastion protecting our American faith. It is important that it be said and understood that out of the laboratories and scholarly activities of our universities is flowing a stream of discoveries and new concepts which continue to improve our health, better our environment, increase



Photographed just prior to commencement exercises are (left to right): Lewis W. Douglas, '17, Archbishop Richard J. Cushing, President James R. Killian, Jr., '26, Karl T. Compton, and Chester A. Higley, Vice-mayor of Boston.





*Representing the Class of 1928 in the procession on commencement day are Ralph T. Jope, '28, (left) and George I. Chatfield, '28, President and Secretary respectively.*

our productivity, elevate our standard of living, augment our intellectual capital, and perpetuate and strengthen American ideals.

During the next decade or so, our university system must acquire the teachers, the buildings, the equipment, and the funds to educate at least 2,000,000 more students than they are now handling. Already industry is talking of the possibility of doubling the real buying power of the American family in the next quarter century. The universities must educate the experts and do the basic research that it will require. As we seek wisely to exercise our immense international responsibilities, our universities must generate the creative forces, develop the knowledge of foreign peoples, and train the men of scope and vision required for the job. The basic research load of the nation, which means the responsibility for creating its future, is carried largely by 15,000 men and women in our colleges. Fifteen thousand out of 150,000,000! This handful of people are doing superb work and are making American universities one of the glories of Western civilization. Obviously it is not wise to harass them or deflect them from their important tasks which benefit us all; rather should we strive to support them in every way.

For these reasons our universities have never been more in need of the calm understanding and vigorous support of the people they serve or more in need of steadfastness of purpose and principle on the part of the teachers, administrators, and students within the universities themselves. They have never been more in need of building up rather than tearing down. All of these things need to be said and understood. It is my hope that some of the inquisitors will say these things and place them in proper relationship to the minor blemishes they find to criticize.

The current criticism of education also points up responsibilities which must be unflinchingly met by the universities. They must not permit themselves to be infiltrated or corrupted by those who conspire against our government. They must rid themselves of the conspiratorial and unfit, if they ever appear, but they must do so with due process and full observance of civil rights. They have demonstrated in the past that they can do this better than any other agency. Our great universities must be built of many kinds of men, and not of men in the image of any one type. They must be hospitable to the man who has the courage to be different, provided he has the gift to be wise. They also must defend the man who has the courage to conform, provided he has the gift of being creative. They must avoid authoritarianism, regimentation, and the doctrinaire. Universities corporately must not take sides, except to the basic commitments and ideals of our society. They must not become subject to any outside control, but they must always be responsive to the small voice of individual and social conscience calling for integrity and public responsibility. They must seek always to train their sights on ideal aims. They must maintain a free market of ideas where error or partisanship will be revealed and objectivity and integrity confirmed.

An institution with these characteristics is the sanctuary of the mind that is joyfully free — and the mind that is not free profanes it. An institution such as this is the most inhospitable of all environments to totalitarianism. The searching clarity and interplay of this environment will inevitably wither communism when it injects itself. An educational institution which accepts these responsibilities and possesses these characteristics has the best of all insurance against infiltration. It has a built-in spiritual servomechanism to correct its errors and maintain its aim. This is not a new state of grace; it is a quality long sustained and of definitely proven worth.

All these things need to be said, for people do not always understand the subtle things which make a university a great university. We in education have the responsibility, which we have usually burked, of codifying and explaining the principles and policies which underlie our educational institutions and make them effective.

Far more is involved here than stressing "academic freedom." Academic freedom somehow has come to connote academic privilege, which it is not. What is involved is the formulation, explanation, and protection of those tested means by which a free society most effectively preserves its past, creates its future, and prepares its young people to be its citizens, its experts, and its leaders. We must make it clear that a voluntary association of free scholars pursuing truth freely wherever and however it may be found is the tested way of accomplishing this mission for our society. We must make it clear why a college cannot be managed like a corporation or an army and still be great. It is the responsibility of our strong and stable institutions to demonstrate that this is true and to resist with courage and determination any invasion of their independence and any distortion of their tested procedures.

*(Concluded on page 536)*

# Free Trade for a Free World

*A Necessary Cementing Influence of the World's Free Nations  
is Free and Easy Exchange of National Currencies,  
Combined with Unrestricted Movement of Trade*

By LEWIS W. DOUGLAS

COMMENCEMENT ADDRESS

I am grateful to President Killian for inviting me to participate in the commencement exercises of this distinguished center of scientific learning, and for giving me this opportunity to return to the scene of my misspent youth. Here, as a graduate student, I learned much that I have since forgotten. Here my sins of omission and commission inscribed a scarlet record which fortunately was not read by the authorities. Here I did not do many of the things that I should have done, and here I did many of the things I should not have done. Accordingly, I make free and full confession that I am the living evidence which confirms Jefferson's view of some graduates of institutions of learning: "They neither possess knowledge enough to be skilled in the sciences or the arts, nor industry enough to be useful in commerce and trade."

During the long period of time which has intervened between my departure from these halls and my return today, I have learned one important lesson. That portion of our lives that is devoted formally to the acquisition of knowledge in an educational institution comes to an end when we leave behind us the personalities and paraphernalia of the campus. But this does not bring to a close the period in which we learn more about life and human behavior and the nature of the universe itself. For human living is in one sense a continuous process of education. So long as there is life in the human body a person is continuously absorbing the facts of his environment. He is continuously interpreting what he observes,

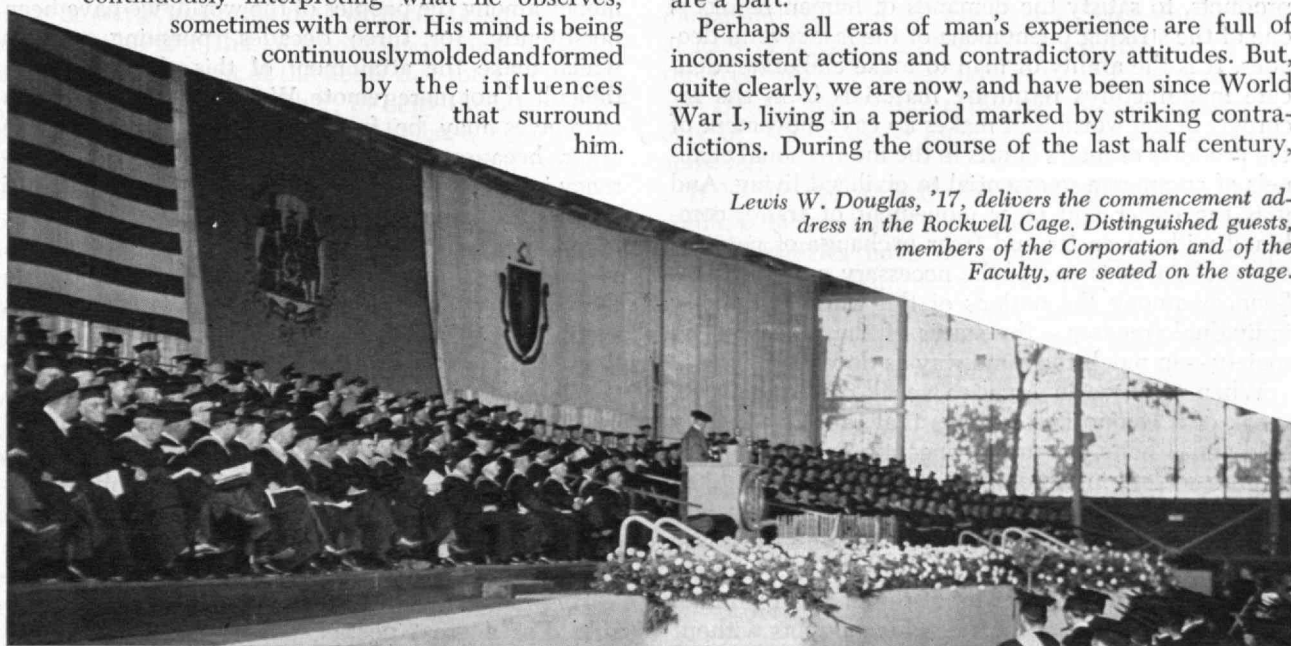
sometimes with error. His mind is being continuously molded and formed by the influences that surround him.

At this point may I make an observation about the difficulty of communicating between my generation and yours. A very considerable span of time separates us. I have lived in a period of history of which you have gained some intellectual view from the books which you have read and the tales which your elders have told you. We use the same language, to be sure, but to many of the words which are common to us both, you attach connotations of which I am unaware. The ease of communication between us is somewhat impeded, also, by what I confess is your view of the older generation. You, rightly, look upon us as a group that has made a pretty thorough mess of a world, which, but for us and our grievous mistakes, might have been a more pleasant place in which to live. And it is unfortunate that many of the older generation unconsciously look upon those of the younger generation as being too youthful to have acquired that ripe wisdom which, so we elders often think, is the product of long years of experience, sometimes stuffed and sometimes stuffy. And so, because of the nuances of language, and a rather natural antipathy between different generations, we find it difficult to understand each other.

But despite the impediments to communicating with each other and to understanding each other, I shall attempt to discuss, very briefly, a matter which is urgent and of far-reaching significance to ourselves and to that large segment of the world of which we are a part.

Perhaps all eras of man's experience are full of inconsistent actions and contradictory attitudes. But, quite clearly, we are now, and have been since World War I, living in a period marked by striking contradictions. During the course of the last half century,

*Lewis W. Douglas, '17, delivers the commencement address in the Rockwell Cage. Distinguished guests, members of the Corporation and of the Faculty, are seated on the stage.*







At the open-air luncheon on commencement day, distinguished guests and retiring members of the Faculty may be seen at the head table (with flowers). In the foreground guests of Dean and Mrs. E. P. Brooks are (clockwise, beginning at near corner of table): Mrs. E. P. Brooks, Malcolm G. Kispert, '44, L. C. S. Barber, General Consul, England, Walter J.

Beadle, '17, Dean Thomas P. Pitré, Mrs. Thomas P. Pitré, J. M. Hicks, Mrs. J. M. Hicks, Mrs. Suzanne Lunn, John A. Lunn, '17, George R. Harrison, Miss Minerva Cheshire, Mrs. E. C. Manderson, Hermon F. Bell, '03, Mrs. Arthur Shurcliffe, '03, Dean Andrey A. Potter, '03, John B. Wilbur, '26, Professor Walter H. Gale, '29, Mrs. Walter H. Gale, Mrs. Paul A. Gifford, Mrs. David Blunt, E. P. Brooks, '17, and Mrs. L. C. S. Earber.

we have accumulated knowledge of the laws of the physical universe which is as awesome in its magnitude as it is frightening in its quality. The deep advance that we have made into what at the turn of the century was called the unknown is not a mere accident of history. It is rather the culmination of a long period of inquiry into the nature of matter and the laws of nature which commenced when men's minds began to throw off the tyranny of prejudice and superstition.

This great institution is a reflection of what has been and what is, and you who are today receiving degrees at its hands are the repositories of a greater amount of knowledge of the material universe than any other group of young men and young women who have ever before departed from academic halls.

The application of scientific laws to the production of a countless number of commodities, goods and products, to satisfy the demands of human beings is one of the striking phenomena of the last several decades. It is the ability of man to make elaborate, delicate manufactures requiring materials from the far corners of the world that makes an easy movement of the products of man's efforts in the international channels of commerce so essential to civilized living. And it is the easier and freer movement of trade, combined with an easier and freer exchange of national currencies that is one of the necessary cementing influences among the nations of the world who view individual freedom — the status of the individual in society — in much the same way as do we.

When we here in America speak of freedom, we speak of a composite of things that reflects a deeply held and, I hope, enduring conception of society. We mean a society in which men may enjoy the right of assembly. We mean a system which vests men and women with the right to seek redress against the abuse of arbitrary private power and the excesses of public authority. We mean an order of things in which man may speak his mind and express his thoughts without

fear of being snatched away into the oblivion of the prison house. We speak of a society in which people may worship the God of their own choice and in their own way. We mean human freedom, a society in which men and women may enjoy the benefits of a free market place; the right to own property; the right to earn one's living according to one's talents; the right to accumulate for enjoyment in the present and security for the future. We mean that freedom extends both rights and imposes responsibilities. Such freedom is indivisible. An impairment of the right to economic freedom ultimately means an infringement of the right of free speech and, finally, of the right to worship as one chooses.

But at the very time that science and modern technology, if they are to be fully exploited for the benefit of mankind and to the advantage of our country, requires an easier and freer movement of trade and money among the peoples of the world, we have been persistently, for three decades, pursuing policies which make the attainment of this objective more difficult, if not more remote. We seek a world in which currencies may be freely exchanged one into the other, because we realize that confidence in a currency is essential to an expansion in the production of goods and the performance of services for the benefit of our own countrymen and human kind everywhere. We become disgruntled with other countries because they do not adopt policies of easier and freer convertibility of their money. We become critical when they discriminate against American goods and invoke an elaborate network of restrictionism in efforts to maintain some semblance of economic and financial solvency. And yet we, ourselves, have been engaged in practices and have been following a public policy of excluding imports — a policy as incompatible with a stable currency as it is conducive to the intervention of the state in the economic affairs of our lives.

This is not unnatural. Certainly it is understandable. For a great people, populating a continental



mass like ours that has grown up in seclusion and has become, over the many years, so accustomed to protectionism and the subventions it provides, cannot be expected suddenly to change their habits or to modify their attitudes.

Let me punctuate what I mean when I say that we have pursued a policy of excluding imports by referring to a recently reported incident:

"The ping pong ball is bouncing its way to fame in world economic history. The United States tariff on those imported from Canada has recently been raised by administrative action from 10 per cent to 95 per cent of its value. Ping pong balls, customs authorities have ruled, since they are now shot from children's guns, are 'ammunition.' Perhaps, indeed, they symbolize the way United States tariff policy aims to kill international amity."

And so it happens that within the community of nations that believe in freedom of the individual, the imperatives of science have been contradicted by the pressures of politics. The universal and catholic impulses implicit in the advancement of scientific and technical knowledge have been frustrated by the parochial and divisive forces of vested and special interests. This is one of the many contradictions of our times.

A powerful case was made for a high protectionist policy during that period of American history when our country was, on balance, a debtor to the rest of the world. Our surpluses of raw materials and farm products — wheat, cotton, corn — found their natural and unsubsidized way into foreign markets and provided the foreign moneys necessary to pay interest on and to amortize the debts which we owed to foreign investors in American enterprise. But during World War I our position shifted. From being a great debtor, we became a great creditor. This was a dramatic and historic event unnoted by most Americans. Instead of being under the compulsion of exporting goods to service our debts to foreign investors, we were by all the rules of sound money and international order under the necessity of receiving imports in order that the foreigner's debts to us could be paid, for it must be self-evident that only with goods and services can debts be met. But we chose, on the one hand, to insist on the payment of the debts that foreigners had contracted and, on the other, to deny them the only method by which the debts could have been paid. The end was clear, definite, predictable and certain. The gold standard, an instrument of international discipline and order, an unimpeachable measure of value, a symbol of free enterprise and an impediment to dangerous experiments with authoritarian governmental practices, in September of 1931 came crashing down in fragments. The subtle international order of which it was an important pillar fell into disorder and confusion. A new period of modern history was inaugurated. The requirements of national interest and international order had been rejected. The return to normalcy had become the road to ruin and destruction.

Science had been contradicted by politics. Knowledge had been frustrated by indifference. Will the rules of history be violated, will the wisdom of Wil-



Honored guests of Dean and Mrs. Edward L. Cochrane at the commencement luncheon in Dupont Court, include (in clockwise order from near end of table): Vannevar Bush '16, Mrs. Horace S. Ford, Mrs. Vannevar Bush, Horace S. Ford, Chester A. Higley, Vice-mayor of Boston, Colonel Charles F. Baish, '21, Mrs. Charles F. Baish, Lieutenant General Withers A. Burrell, Colonel Leo A. Bessette, Captain Joseph M. Kiernan, '25, Mrs. Glenn S. Coleman, Colonel Glenn S. Coleman, Edward L. Cochrane, '20, Mrs. Joseph W. Barker, Dean Andrey A. Potter (bowing), James R. Killain, Jr., '26 (standing), Joseph W. Barker, '16, Marshall B. Dalton, '15, Everett S. Coldwell, '15, Joseph J. Snyder, 2-44, Andrew J. C. McGowan, '20, Robert T. Haslam, 11, Mrs. Robert T. Haslam, Thomas D. Brophy, '16, and Mrs. Joseph J. Snyder.

liam Graham Summer (who fought the intellectual battle so gallantly for sound money, the urgent requirement of our period and of economic procedure) once more be ignored?

This problem of today is the same problem as it was in the Twenties and the Thirties. It is not a novelty. Though its dimensions are greater and though it has been aggravated by war and the threat of war, it is an issue which is common to your generation and to mine. But at least we have reached a point of vantage from which we now identify unmistakably an unbalance between the dollar area and the non-dollar area and the restrictionism and discrimination invoked by others which it necessarily entails. We recognize the benefits and the advantages, the enjoyments and the fruits of restoring an easy equilibrium at least in large parts of what we are disposed to call the free world. But we have not yet faced candidly and frankly the methods, the measures and the policies by which alone an enduring balance may be achieved.

It is not the exclusive responsibility of our own country to establish an equilibrium in the world. Other countries have important roles to play. But today I am speaking only of our part in the drama. We at home have one of three alternative courses to follow. We can continue, as we have since the close of World War II, to maintain a balance within the free world by subsidizing those portions of the American economic system which naturally produce surpluses whose only outlet is in foreign markets. We can continue, directly or indirectly, to buy their products, to give them away abroad, and to levy taxes therefor upon the general American taxpayer. We can continue a policy which makes both the exporter of his surplus and the foreign receiver of it perpetual



*Seated at the speakers' table at the commencement day luncheon are, left to right: Mrs. E. Francis Bowditch, Professor Earle Buckingham, Mrs. Earle Buckingham, Dean E. Francis Bowditch, Mrs. Earl B. Millard, Professor Earl B. Millard, Mrs. James R. Killian Jr., Dr. Karl T. Compton, James R. Killian, Jr., '26, Dr. Lewis W. Douglas, '17, Mrs. Karl T. Compton (hidden by flowers), Professor Walter C. Voss, '32. At the near table (in clockwise order) are: Oscar F. Hedlund, Mrs. Oscar F. Hedlund, Sanfrid K. Johnson, George I. Chatfield, '28, Deborah Jope, Mrs. Ralph T. Jope, Mrs. Thomas C. Desmond, Dean Harold L. Hazen, '24, Mrs. George I. Chatfield, Ralph T. Jope, '28, Mrs. Thomas D. Cabot, and H. B. Richmond, '14.*

mendicants of the American treasury. But this course corrupts our own society and taints, if it does not seriously damage, the relations of amity which should exist between the members of the coalition to which we belong.

The second method by which a balance can be achieved is to preserve our present policy of high protection which subjects our exports to the necessary measures of discrimination and exclusion which foreign countries inescapably must invoke against us. But this I hope we have learned means a decline in critical American exports from critical American areas. It means the insinuation of public authority into the economic affairs of vast segments of American society. It means, in many cases, the determination by public authority of that amount of goods which may be produced from time to time. It means the identification of the price at which those goods may be sold. It means the dispensation of public funds as compensation for not producing goods and not performing services which mankind desires. It means large public

undertakings in efforts to absorb the unemployment which this policy produces. It means a wide variety of subventions from the public purse and a weight of taxation which historically has proved to be the undoing of all free societies.

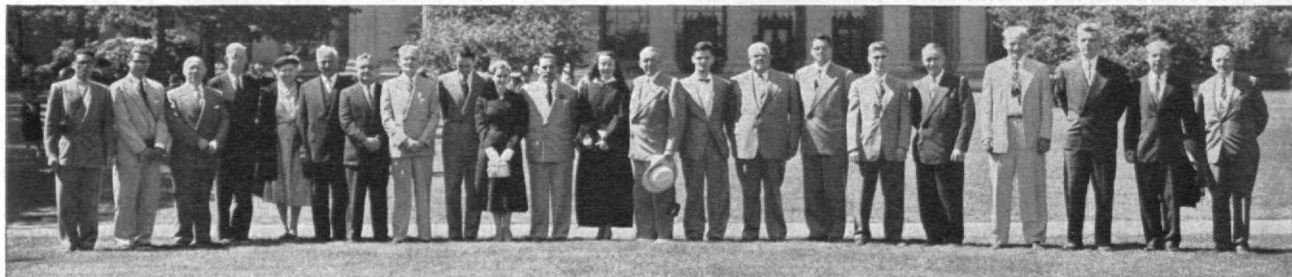
The third alternative is that of giving other parts of the world at least an opportunity to support themselves so that by selling to us they may earn the dollars with which they may buy from us. This is not an easy policy for us to pursue. It cannot be invoked suddenly. It should not be adopted in an excessive form, for abrupt and intemperate actions may cause internal dislocations which will not be pleasant. But it is the only policy which, if pursued progressively and with courage, may produce the sort of balance which we recognize to be to our advantage. This is the only policy which may bind the nations of the free world together and enable them to achieve a real sense of security and stability. It is the only policy, combined with others, by which we can preserve within our own country the characteristics of a free society which are, alike, the sources of our strength and the envy of the world.

Freedom is a tender and sensitive enjoyment of man. Huge wars and threats of wars, huge expenditures on arms and defence produce such a migration of power to agencies of government that the preservation of human liberty has become as formidable a task as it is essential. In this world of ours it is our behavior and not our words which will determine our future, test the stuff of which we are made and the wisdom which we possess.

There are many ingredients to the cement which may bind the free peoples of the world together. But no number of international political institutions resting upon the shifting sands of economic disequilibrium and declining trade can long preserve fidelity to a common cause and loyalty to a common end.

No amount of exhortation — no constant incantation of the creed — will create and sustain the spirit and the strength of the coalition of free people against the disintegrating forces of financial disorder and commercial confusion.

It is for us no less than for others with whom we are and ought to be intimately associated — for the task is not ours alone — so to mould and so to devise measures of wisdom, and enlightened self-interest that an enduring harmony may at last be achieved among one and all free peoples.



*On commencement day, the following family group was photographed. Left to right are: Myron Hoffman, '51, Allan S. Hoffman, '53, Saul A. Hoffman, '16, Nathaniel McL. Sage, '13, Mrs. Nathaniel McL. Sage, '13, Dr. Karl T. Compton, Edwin D. Ryer, '20, Ray C. Burrus, '22, Ray C. Burns, Jr., '53, Genevieve A. Lavedan, '54, Pierre F. Lavedan, '20, Joan M. von Fleckenstein, '53, Jackson G. von Fleckenstein, '19, Raymond A. Dietz, '53, Walter Dietz, '23, Walter E. Dietz, '52, Bruce B. Beckley, '53, Kenneth F. Beckley, '27, Hollis F. Ware, '25, Colin C. Ware, '53, Harold A. Knapp, Jr., '48, and Harold A. Knapp, '17.*

# The Chances for Peace

*A Condition of Lasting World Peace is Reconstruction  
of Confidence and Respect between Nations and Peoples  
Combined with Mutual Help through Exchange of Ideas*

By ERWIN D. CANHAM

ALUMNI BANQUET ADDRESS

THE evidence accumulates that we are not going to have a global war in the immediate future. Of course any kind of prophecy is rash, even though some people make radio or newspaper careers out of prediction. We must recognize that the Communists may be playing an elaborate hoax on us that would serve their purpose well. But the indications mount that they want a breathing spell — and the news hints that they need it — at least for the time being, especially in the satellite states.

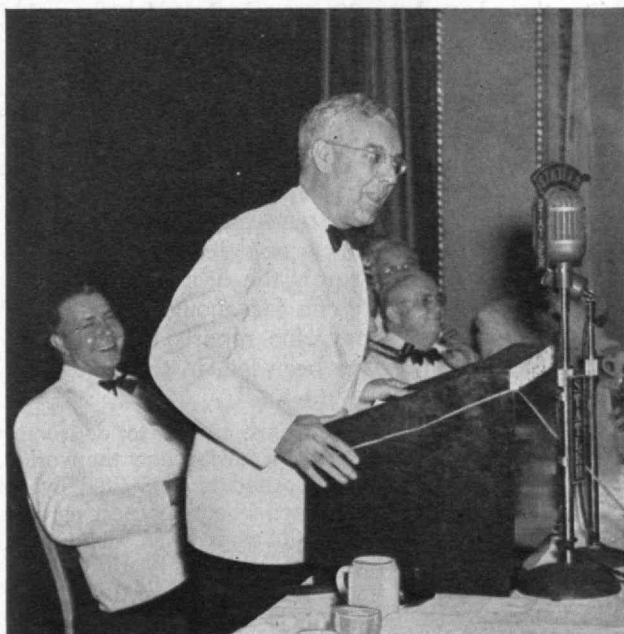
The news also demonstrates that the United States needs, very badly, to revise and strengthen its own policies. Of course our present misunderstanding with Syngman Rhee should not have occurred. The Korean War itself should never have occurred and it could have been avoided. We should not have lost China to Communism. We should not have to tolerate what is called McCarthyism. We should not be as misunderstood and misinterpreted as we are, all the way from the Thames to Singapore, from Ottawa to Buenos Aires. We should be lifting the hearts and minds and bodies of men with the kind of practical, applied idealism that President Eisenhower so well expresses. We will not have done our part to set ourselves, and the world, on the path toward stability

and peace until we begin to express and to live these principles more effectively. What can we do now to begin turning the tide in our favor?

I really believe that our primary need is an affirmation of first principles. The men at Philadelphia found it necessary to clarify their beliefs through a Declaration of Independence. On at least four occasions Abraham Lincoln found that he had to put into clear and ringing words the principles that gave his cause meaning and purpose. Woodrow Wilson influenced world action much more by his eloquent statements of fundamentals than he was ever able to do at the conference table. So it has often been. Now, more than ever, I believe, we need a Declaration of Principles to affirm where we stand, what we stand for, and whither we are bound.

I am not so presumptuous as to hope to present you with the text of such a Declaration of Principles, but I can tell you some of the things I think it should include. I believe it should proclaim the only authentic revolution of human history, which is the emergent free system of which we are a part — the system extending all the way from the awareness of one God and the Law expressed on the hills of Judea long ago, to the distributive, equalitarian form of capitalism which we operate in this country today. I believe this statement of principles should be based on the great, dynamic goal of self-determination for men and nations, and on the present fact of the interdependence of men and nations. These are powerful twin principles. The concept of self-determination has immense dynamism. It has sometimes been perverted into narrow nationalism. It must be combined with the fact of interdependence, and set to work. More than anything else, what we stand for in the world today is the right of each man to make his own decisions, within the framework of the rights of others. Let us say so.

You can think of the great truths by which we live as well as I. You will not laugh nor will you sneer when I say that love for God and man is the central core of these truths. Love for God is not always, nor is it necessarily, expressed in formal religion. Rather is it shown in daily living. To the extent to which we seek to manifest integrity, social conscience, good will, and respect for ourselves and for others, we are living love. The decent, generous, friendly human being is living love. And the overwhelming part of the human race is decent and friendly — when people are given half a chance to understand one another.



Erwin D. Canham, Editor of the Christian Science Monitor, delivers his address at the Alumni Day banquet.





Seated at the speakers' table at the Alumni Day luncheon (in usual reading order) are: George D. Stevenson, '53, Mrs. George D. Stevenson, Professor Elspeth D. Rostow, Erwin D. Canham, Mrs. Erwin D. Canham, Dr. Godfrey L. Cabot, '81 Mrs. Karl T. Compton, President James R. Killian, Jr., '26, Edwin D. Ryer, '20, Dean E. P. Brooks, '17.

Without making our declaration a mawkish or sentimental expression of formal religion, let us try to express some of these basic principles. When translated into political and economic terms, decency, kindness, and integrity become very powerful forces. I am not speaking of benevolence: we have learned that mere benevolence doesn't get very far, and that gratitude is a delicate flower that cannot be bought with money, and shouldn't be. But the kind of respect for one's fellow man, which is typical of the best of the human race, is a social principle of the greatest power.

Our political relations need to be converted into the terms by which we live the best of our human relations. Those wise and noble men laid down the principles of desirable human relations at Philadelphia; our great religious leaders — Moses and Christ Jesus and Paul, to mention only a few — proclaimed similar principles with utmost clarity. Let us proclaim the principles which are central to free society.

But of course words are not enough. As we so often say — and so rarely do — there must be deeds as well as words. What, then, are the terms in which American policy ought to be recast?

First, let us straighten out our relations with one another at home. We have plenty of problems, but none of them is more urgent than our present inability to trust one another. Confidence in the integrity and good faith of our fellow Americans, no matter how much we may disagree with them politically or economically, is essential. That is why the tactics that are called McCarthyism give us such concern. They are destroying our capacity to trust one another. The words of Learned Hand are so clear:

That community is already in the process of dissolution where each man begins to eye his neighbor as a possible enemy, where nonconformity with the accepted creed, political as well as religious, is a mark of disaffection; where denunciation, without specification or backing, takes the place of evidence; where orthodoxy chokes freedom of dissent; where faith in the eventual supremacy of reason has become so timid that we dare not enter our convictions in the open lists to win or lose.

If the original problem on subversion had been dealt with vigilantly and responsibly, Senator McCarthy would not be the portent he is today. The tragedy is that three years ago, President Truman did not take the advice urged upon him by many to set up a judicious investigative commission of highest standing and character, to sift all charges and purge the

public service in a rational, responsible, and honest manner. Of necessity the commission would have had to be composed of Americans of the greatest eminence and trustworthiness — it ought to have been a commission whose authority nobody could successfully question. But Mr. Truman left this task until too late; partly he left it to his friends in Congress and they failed.

Is it too late now for President Eisenhower to take the problem of subversion out of the hands of irresponsible investigators; is it too late to return judicial power to the judiciary, to restore administrative authority to the executive branch of government? I do not think so. Already, there is a growing fear of the power of irresponsible investigations, even in Congress. Even now, a top-level, nonpartisan Commission on Subversion could do a constructive job of detecting danger where it exists and, above all, of reassuring the people where danger does not exist. We must be able to replace fear and mistrust and hatred of one another with genuine and justified confidence in our fellow citizens. We must learn and affirm the difference between dissent and treason, between stupid irresponsibility and subversion.

There has been subversion in government, just as there has been some subversion in college faculties, in the pulpits, and in the editorial offices, but for every traitor there have been 20 men who have been merely stupid or irresponsible, and at least 100 honest and reasonably intelligent men. Let us stop being afraid of ideas; we do not have to suppress ideas and we cannot suppress them. We can destroy false ideas only with the best truth we know.

As soon as possible the State Department must be rehabilitated. I can understand the unwillingness of Secretary Dulles to endorse or defend many of the men he inherited. But surely the dismantling of the State Department has gone far enough. A current issue of a reputable magazine reports the silly extremes to which we have been led, in the following words:

Not long ago, a friend of ours agreed to do some work for the State Department. Knowing how the world spins in 1953, he was not surprised to be visited by a senior investigator, who inquired about his past career and associations. However, at the stage when such interviews usually end, the investigator cleared his throat and pulled a paper out of his pocket. He explained that under his new instructions he was to get answers to these questions: (1) Do you believe in the Marshall Plan? (2) Do you believe in NATO? (3) What is your feeling about



Also at the speakers' table at the Alumni Day luncheon are (from left to right): Dean E. P. Brooks, '17, Mrs. Edwin D. Ryer, Dr. Karl T. Compton, Mrs. James R. Killian, Jr., Mrs. E. P. Brooks, Mr. Frederic A. Eustis, '03, Mrs. Frederic A. Eustis, Mr. J. Tyrrell Cheney, '03.

Tito? (4) Do you favor recognizing Franco? (5) Are you in favor of our intervention in Korea? (6) What do you think about China? (7) Do you consider yourself a supporter of Chiang Kai-shek?

Not without some justification somebody has recently said, "When the FBI investigators move into your neighborhood, either one of your friends is going to be hauled away to the penitentiary or he has been asked to accept a high position in the government." The plain fact is that, through the attacks upon the State and upon Secretary Dulles, coupled with President Eisenhower's unwillingness, as yet, to stand and fight, the State Department is a shambles. For this situation one can make allowances on three counts: (1) possibly many functions that had attached themselves to the State Department need to be sheared away; (2) evidently there were more than a few persons in the State Department who did not measure up to the highest standards of competence; and (3) it may be that a few persons of equivocal loyalty have remained. It is also true that a good number of able and faithful public servants have been unjustifiably attacked, and that there is nothing, today, to attract to the Department's service the persons of ability who ought to be there. The top diplomatic appointments of the Eisenhower-Dulles regime have been of very mixed character. If there is a single crying need in the Administration it is for the State Department to be restored to the vigor, prestige, efficiency, and experience which are sorely required in these days. We need wise technicians in our foreign service, and we have been driving them out—or terrorizing them—for too long. These men are just as important as the general staffs in the Pentagon or the intelligence officers in the Counter Intelligence Agency—it can be even argued that they are more important.

I have recently returned from a few weeks in Western Europe, as part of my regular job to keep in touch with news from all parts of the world. I can recall no time, in recent years, when opinion overseas was so puzzled about the United States. Rarely has an American President been so respected, or widely known when he took office, as was President Eisenhower. Rarely has there been so great a disillusionment as has resulted from the President's difficulties with Congress. Every thoughtful European with whom I talked last month asked me about Senator McCarthy. In one way or another, most of them expressed the view put—perhaps indiscreetly

—by Clement Attlee: "One sometimes wonders who is the more powerful, the President or Senator McCarthy."

No doubt these persons have got an exaggerated idea of the Wisconsin Senator's importance from the publicity he has obtained. To these people, Senator McCarthy is a serious portent of homegrown Fascism. I tried to disabuse those I met, and the only point I am trying to make here is that the stability and purpose of the American government are now very much doubted in many parts of the world. Whenever President Eisenhower speaks, he helps to wipe away many misconceptions. When it becomes clear that he is able to get the major part of his program through Congress—if that comes about—more misconceptions will vanish.

Why is it important what others think about the American government? Why shouldn't we disregard them? Are we entered in a global popularity contest? Certainly not. But we have the responsibilities of world leadership. There must be confidence and respect between nations and peoples, just as there must be among individuals. We have to restore our world reputation for reliability and steadiness. The sooner we stop tearing ourselves apart, the sooner we can deal responsibly with the rest of the world, and the greater contribution we shall be able to make to the cause of peace.

What are the exact terms of the peace problem? First, of course, we must strengthen and preserve the military capacity of the free world. We must have sufficient power to render aggression suicidal. But this power must be responsibly stewarded, with policies that are not, and do not seem to be, reckless or provocative. Second, and related to the first, we must do our part in securing and maintaining the economic stability of the free world. More than anything else, the other free nations have been alarmed at being caught between Soviet and American military power, or of being drawn into the maelstrom of a major economic recession in the United States. Third, we can regain the clear leadership of the free world by affirming and explaining the meaning of the historic liberating forces of which we are the principal Twentieth Century expression. Fourth, we can share and exemplify these liberating forces much more effectively than we have done hitherto. Such a policy does not require this country to engage in a vast give-away program, but it does necessitate the opening up of better two-way channels of communication and ac-



*For many years, a pleasant, relaxing, social event of mid-afternoon on Alumni Day has been the informal reception held for Alumni and friends of the Institute at the President's House. This year, while President and Mrs. James R. Killian, Jr., held open house with the Alumni Association's President and Mrs. Edwin D. Ryer in the receiving line, many guests mingled in the garden of the President's House as shown here. The dome of Building 10 may be seen in the background with Walker Memorial (left) and Monroe Dormitory (right) just beyond garden wall.*

tion between ourselves and other peoples. Fifth, we need to develop far wider use of our great contribution to the mid-century — the dynamics of voluntary private organization.

The last point needs explanation. I believe we have learned that there are valuable social alternatives to communism or socialism at one extreme or cartels, monopoly, or old-school capitalism at the other. Other peoples are beginning to learn the same thing. In the United States we have evolved a degree of socially responsible capitalism. But our system has been articulated and helped to work by our instinctive development of private, voluntary organization. In this country we have a passion for voluntary organization, not merely because we like to wear funny hats and sing community songs, but because we have sensed that, in our kind of country, we will have either free organization or statist organization. We have chosen free organization.

Look about you, in your personal experience, and count the channels of professional or civic communication which are part of your daily life. There are some 4,000 national trade, professional, and other types of nonprofit organizations in the United States. There are 12,000 local trade associations, 4,000 chambers of commerce, 15,000 civic service groups, 100,000 local chapters and clubs of women, 70,000 labor union locals, 10,000 farmer groups — I am out of breath and the list is just beginning.

These organizations have been of incalculable value in raising standards, in generalizing skills and knowledge. We have learned the great, historic lesson

that comes usually only in peril, namely, that it is far more beneficial to share than to hoard or secrete. We did not know this a half century ago; we knew it far less well a quarter century ago, or even a decade ago. The educators, the scientists, the engineers, the service clubs, the trade associations, have all set patterns for the pooling of ideas.

Mutual help through the free interchange of ideas can help save world society. It is based upon a deeply spiritual principle, for it comprises respect for individual man and an awareness of his social interdependence. Application of the principles of mutual help and the sharing of knowledge can surpass achievements of totalitarianism every time. They can redeem the selfish drawbacks of old-school capitalism. They can curb monopoly; they can open doors for the underdeveloped in the world who are clamoring for their day in the sun.

Ours is indeed an age of awakening. The masses of humankind are on the march. They must learn the terms of the choice confronting them. Will they go toward totalitarianism and new slavery? Or will they stay with the emergent social revolution, which is both very old and yet very new, and which the United States has carried as far forward as anybody else? Of course, I do not say that our national experience will apply exactly to the needs and aptitudes of any other people. What the men and nations of Asia and Africa can apply will be solutions adapted to their needs and aptitudes. But there is much in our experience that is universal. There is much that we can share. Finally — and this is very important — there is also much that we can learn.

Let us, therefore, open up, for relations with the rest of the world, the same kind of channels of voluntary private organizations which have so richly irrigated our national society. Let every national organization ask itself: "What can we do to transmit our experience across frontiers and to learn from others?" It may be that a simple program involving exchange of persons, or the exchange, on a regular basis, of printed technical information will be adequate. Possibly any of a dozen other ways, in which we can begin to talk with other people in terms of our mutual experience, may need development. No language is more evocative, no *lingua franca* more free, than the language of common experience.

The basis of world society and community among nations will not be found, I am confident, in political or governmental forms. That is a long way off, and it involves dangers. But what we can do, beginning now, is to open the channels by which peoples can speak directly to other peoples. This has already been done by scientific groups, service clubs, and many other American organizations. Perhaps we need a clearing-house by which the work of such organizations can be made more effective. In any case, we have a mandate. It is to lead the world's people in a revolution — not toward the old chains of slavery to which Marxism and any form of totalitarianism would condemn them under new names — but toward the developing freedom which is the birthright of societies based upon the rights of man. Let us find the ways of leading that revolution. As we do, we will build the solid groundwork of peace.



# Commencement, Reunion and Alumni Day Activities

THE five days from June 11 to June 15, 1953, inclusive, may well be numbered among the busiest which M.I.T. has lived through since the Mid-Century Convocation of 1949. Several thousand persons proudly watched almost 1,000 students become Technology Alumni at commencement exercises in the Rockwell Cage on Friday, June 12; approximately 1,200 persons heard James R. Killian, Jr., '26, give his "State of the Institute" address at the Alumni Day luncheon on June 15, and, on the night of the same day, some 850 Alumni took part in the Stein-on-the-Table Banquet, while 120 wives had their own banquet in adjacent rooms in Boston's Hotel Statler. In addition to these events, which have become accepted events in connection with commencement and Alumni Day activities, separate ceremonies for the commissioning of officers in the Reserve Officers' Training Corps were held on Thursday, June 11, this year, rather than as part of Commencement Day as was the practice in former years.

Perhaps the greatest innovation in events which ended the school year was the quarter-century reunion of the Class of 1928, who staged a three-day gathering on the M.I.T. Campus with members of the Class and their families quartered in Baker House. For the first time in the Institute's history a class reunion could be held, in its entirety, "back at Tech" and those who participated were enthusiastic in their praise for the novel and elaborate program worked out in great detail by Ralph T. Jope, George I. Chatfield, William H. Carlisle, Jr., James Donovan, and other hard-working members of the Class of 1928.

The success of this first "on campus" family reunion may well provide stimulus for other classes to return to Technology to be "renourished by thy side."

As might be expected, the rights—and responsibilities—of free men was the central core of inspirational thinking exhibited in the baccalaureate address of the Reverend Frederick M. Meek of the Old South Church in Boston, in the Alumni Day banquet address of Erwin D. Canham, editor of the *Christian Science Monitor*, and in the valedictory address of Dr. Killian. The texts of these addresses will be found on earlier pages of this issue, while Dr. Killian's report to Alumni forms a later portion of this summary report.

## Senior Week Activities

For the graduating seniors, social events began on Friday, June 5, with a Class Banquet at Rockwell Cage and were concluded with the Commencement Luncheon and President's Reception in the Great Court on Friday, June 12. Walker Memorial was the scene of the Class Party and Carnival on the evening of Saturday, June 6. A mixed outing to the Blue Hills Reservation was planned for Sunday, the 7th, and a cruise to Nantasket was an evening event on Monday, June 8. The annual Senior Ball took place at the Sheraton Plaza in Boston on Tuesday, June 9, and no activities were planned for the following day.

In contrast with the exercises of former years, a separate ceremony for awarding Army and Air Force commissions to graduates who had taken the ad-

*At the near table, guests of Dean and Mrs. Harrison at commencement day luncheon included (in clockwise order): Ralph H. Howes, '03, Mrs. Roger D. Babson, Roger D. Babson, '03, Edward M. Chadbourne, '03, Omar S. Swenson, '03, Charles L. Bates, '03, LeRoy L. Hunter, '03, Ernest A. Comer, '03, Carleton F. Green, '03, Edward J. Ruxton, '03, George B. Wood, '03, James S. Sheafe, '03, J. Tyrrell Cheney, '03, and, at far side of table, facing camera, Paul R. Parker, '03, Mrs. Paul R. Parker, Richard M. Lawton, '03, John Joseph A. Nolan, '03, Charles B. Cox, '03, George A. Sloan, Mrs. James M. Barker, Redfield Proctor, '02, James M. Barker, '07, Mrs. John J. Dooley, John J. Dooley, '03, and Mrs. LeRoy Thwing*





*Members of the Class of 1928 and their families, . . .*

vanced program in the Reserve Officers' Training Corps was held in Huntington Hall (Room 10-250) on Thursday morning, June 11. The invocation was given by Father Edward J. Nugent. Julius A. Stratton, '23, Vice-president and Provost of M.I.T., represented the Institute at these commissioning exercises which were planned by Colonel Charles F. Baish, '21, Head of the Department of Military Science at M.I.T. Lieutenant General Earle E. Partridge, Commanding General, Air Research and Development Command, and Major General Roderick R. Allen, Commanding General, Fort Devens and Boston Army Base, were the principal speakers for the Air Force and Army, respectively. Colonel Glenn C. Coleman, Head of the Department of Air Science and Tactics at M.I.T., administered the oath of office to 174 men who received their bars as second lieutenants. (In addition, approximately 70 men will receive their commissions at the end of Summer Camp.) The presentation of commissions was made by General Partridge to 74 Air Force men, and by General Allen to 176 Army men. Father Peter R. Blynn gave the benediction, and the Needham High School Band gave an admirable demonstration of their musical training by opening and closing the ceremonies by way of horn, fife, and drum.

*A high light of the reunion of the Class of 1928 was the Shore Dinner on Sunday, June 14, in Walker Memorial. At the speakers' table (left to right) are: President James R. Killian, Jr., '26 (with volume of The Technology Review), Mrs. Erwin H. Schell, Professor Erwin H. Schell, '12, who spoke on "The Promise of Tomorrow," and Ralph T. Jope, '28.*



### **Baccalaureate Service**

On Thursday afternoon, June 11, the senior class picture was taken on the steps of Building 10, with the graduates in cap and gown. Class officers then led the procession to Walker Memorial where the baccalaureate services were held. E. Francis Bowditch, Dean of Students at M.I.T., gave the call to worship. James R. Killian, Jr., '26, President of the Institute, selected Matthew 5:2-17 for the Scripture reading, and the Reverend Frederick M. Meek, Minister of the Old South Church, Boston, gave the baccalaureate address, "Democracy Is Not Enough"—the text of which The Review is happy to publish on page 485. Music was provided by Philip M. Richardson, '26, at the organ, and the M.I.T. Choir, under the direction of Klaus Liepmann, Associate Professor of Music.

### **Commencement Exercises**

Friday, June 12, was an important day for members of the M.I.T. Corporation, the Faculty, and especially for the 949 persons who received a total of 987 degrees at the commencement exercises in Rockwell Cage. Opening the day's activities was a Corporation Breakfast which was given by Karl T. Compton, Chairman of the M.I.T. Corporation, and President Killian.

At 10:30, the candidates for degrees filed into Rockwell Cage, leading the academic procession which also included guests of honor, members of the Corporation, members of the Class of 1903, officers of the Class of 1928, and the Faculty. The procession was led by Edwin D. Ryer, '20, President of the Alumni Association. The Most Reverend Richard J. Cushing, Archbishop of Boston, gave the invocation, and Lewis W. Douglas, '17, former United States Ambassador to Great Britain, delivered the commencement address—text of which will be found on page 491 of this issue. As president of the Institute, Dr. Killian, with the assistance of the deans of the five professional schools, presented 89 doctor's degrees, 34 advanced engineering degrees, 267 mas-



photographed on the steps of the Alfred P. Sloan building.

ter's degrees, and 597 bachelor's degrees. Officers of the Class of 1953 who had places of honor in these exercises included: George D. Stevenson, Permanent Class President; Vinson W. Bronson, Jr., Secretary; Mark B. Schupack, First Marshal; John R. O'Donnell, Second Marshal; and George J. Fuld, Third Marshal. Among the recipients of the degrees, representatives of the distaff side included: Mrs. Bianca B. Bincer, Miss Joan M. von Fleckenstein, Miss Patricia A. Jackson, Miss Caroline S. Littlejohn, Miss Carol Robinson, Mrs. Virginia F. Ross, Miss Alice R. Schomburg, Miss Ann C. Wilfert, and Miss Janet D. Zachs.

Following the presentation of degrees, President Killian gave the valedictory address. *The Review* is happy to be able to present this address to its readers on page 489 of this issue.

Members of the graduating class were favored with greater opportunities for employment than ever before in the Institute's history, although many will soon serve in the Armed Forces.

### Commencement Luncheon

Following the highly successful plan inaugurated in 1951, a Commencement Luncheon was held under canvas in Du Pont Court for seniors and their guests. In addition to those taking a major part in the commencement exercises, members of the Faculty who retire at the end of the school year were seated at the head table. Members of the Corporation, and of the 50-year Class, and other distinguished guests had special tables reserved for them as guests of the deans of the five professional schools.

At the conclusion of the buffet-type luncheon, President Killian called on Andrey A. Potter, '03, Dean of Engineering at Purdue University, who spoke briefly on the contrasts between the Institute's present educational facilities and those of 50 years ago when the Class of 1903 was graduated from "Boston Tech" on the site of the present New England Mutual Life Insurance Company building, on Boylston Street.

President Killian then took occasion to comment on the successful achievements of the members of the Class of 1903 throughout the past half century. Those

whose careers were specifically singled out for mention were: Frank B. Jewett,\* Dean Potter, Richard C. Tolman,\* Dr. Katharine Blunt, Susan L. Clarke, George W. Swett, Professor of Machine Design, Emeritus, Walter R. MacCornack, Professor John W. Howard,\* Raymond M. Hood,\* Andrew H. Hepburn, Carlton F. Green, Robert J. King, William V. McMenimen, Edwin F. Greene, the Eustis twins (Augustus H. and Frederic A.), and James A. Cushman, Assistant Class Secretary.

President Killian also took opportunity to introduce Faculty members of the M. I. T. family, seated at the head table, who will retire on July 1. Those retiring are: Earle Buckingham, Professor of Mechanical Engineering; John M. Lessells, Associate Professor of Mechanical Engineering; Earl B. Millard, Professor of Physical Chemistry; and Professor Walter C. Voss, '32, in charge of the Department of Building Engineering and Construction. From M. I. T.'s athletic program, Oscar F. Hedlund, Coach of Track, and Sanfrid K. Johnson, Trainer, are retiring. Additional retirements are: Wallace M. Ross, for 34 years active in the administration of the Technology Christian Association; Mrs. Ruth McG. Lane, Vail Librarian; and Miss Mirian S. Smith, Reference Librarian. Many of this group will continue to serve the Institute on a part-time basis.

Representing the Class of 1953, Marion C. Manderson, President of the Institute Committee and

\* Deceased.

With suitable protection for the Shore Dinner (at far side of table, left to right) are: Professor Truman S. Gray, '29, Mrs. Truman S. Gray, Dr. John W. Chamberlain, '28, and Mrs. John W. Chamberlain. At near side of table is Richard B. Harris, son of Professor Robert S. Harris, '28.







Professor Walter C. Voss, '32 retiring head of the Course in Building Engineering and Construction, was the guest of honor at a banquet given by Alumni at the Hotel Shelton on June 13. In honor of the occasion, the Alumni and friends of the Course presented to the Institute the sum of \$5,400, to be used to establish the Tucker-Voss Award Fund in the names of Professor Voss and his predecessor, the late Professor Ross F. Tucker, who was the first head of the Course. The income from the fund is to be used as a cash award annually to a student in Building Engineering and Construction on the basis of high scholastic standing, leadership, and promise in the field of building. Shown in the reception line are (left to right): Mrs. Albert J. O'Neill, Professor Voss, Mrs. Walter C. Voss, President James R. Killian, Jr., '26, and Mrs. James R. Killian, Jr. Banquet guests included Professor and Mrs. Albert G. H. Dietz, and Mr. and Mrs. Delbert L. Rhind, in addition to those shown above in the receiving line.

The fund was presented to Dr. Killian by Robert M. Becker, '34, Chairman of the alumni group. Illuminated scrolls describing the fund were presented to Professor Voss and Professor Dietz, the new acting head of the Course, by Karnig S. Dinjian, '29, a member of the first graduating class of the Course in Building Engineering and Construction. Toastmaster for the evening was Richard D. Halloran, '36, who also served as treasurer of the group.

The reservation desk in the lobby of Building 7. Those who registered in advance were able to get their tickets at the far side of the desk — without waiting in line.



of the Senior Class for the year 1952-1953, presented the student's point of view in his address to parents and friends of the graduates. As his classmates continue graduate work, begin their professional careers, or enter the armed services, Mr. Manderson took cognizance of the sacrifices which parents frequently make in order to provide an education for their children. He concluded his remarks by indicating that he was just beginning to appreciate some of the problems that parents must face, since he had been married just five days prior to commencement.

As final speaker at the luncheon, Dr. Compton had a special message for the parents whose pride at commencement exercises he could well understand since his own son, Charles Arthur, had been graduated from the Institute in 1951.

Following the luncheon, Dr. and Mrs. Compton, President and Mrs. Killian, and Mr. and Mrs. Manderson received guests in the Great Court. At the suggestion of President Killian, fathers and sons who had been graduated from the Institute were photographed as a group in the Great Court with the dome of Building 10 as an appropriate background.

### Reunion of the Class of 1928

For the first time in the history of the Institute, a family class reunion was held on the Technology campus, with members of the reunioneing class housed in Institute dormitories. Since Baker House, in which members of the Class of 1928 were housed, was built with the aid of funds from the Alumni, it was especially appropriate that this distinctive housing unit be the scene of the first on-campus family reunion.

Under the leadership of William H. Carlisle, Jr., chairman, Dr. John W. Chamberlain, George I. Chatfield, James Donovan, Ralph T. Jope, and Walter J. Smith — all of the Class of 1928 — an exceedingly full and attractive program of events was planned for the 25th reunion of the Class of 1928. From the time of arrival of the first guests, early in the afternoon on Friday, June 12, until the conclusion of the events of Alumni Day on Monday, June 15, under the guidance of 21 committees comprised of 30 members, a full program of activities was in operation. For many Alumni returning to Technology, the reunion provided their first opportunity, since graduation, to see the many changes that had taken place along the Charles River, and they took full advantage of the many new M.I.T. recreational facilities. Alumni, their families, and friends could sail on the Charles in the Institute's new fleet of plastic Fiberglas dinghies, they could swim in the Alumni Pool, they could engage in athletic activities on Briggs Field, they could have luncheon at the Faculty Club, or they could roam the halls of the Hayden Library and other academic buildings. Special efforts were made to provide suitable activities for the wives and children. As a unit, the family could engage in softball, with the younger generation challenging the older; those who wished to play golf could tee off at the course of the Sandy Burr Golf Club; an informal record dance was staged, as was also a trip to Boston's



Members of the Class of 1903 gathered for luncheon on Alumni Day include, in clockwise order: Mrs. James W. Welsh, (in white hat), James W. Welsh, '03, Mrs. John J. Dooley, Arthur B. Allen, '03, James A. Cushman, '03, Walter P. Regestein, '03, Emmor H. Millard, '03, George B. Wood, '03, Mrs. Alexander B. Healy, John J. Dooley, '03, Mrs. LeRoy B. Gould, '03, LeRoy B. Gould, '03, Alexander B. Healy, '03 (at far end of table), Augustus H. Eustis, '03, Miss Sophie G. Blunt, '03, Mrs. Augustus H. Eustis, Charles L. Bates, '03, Mrs. George H. Garcelon, George H. Garcelon, '03, Mrs. Howard S. Morse, Howard S. Morse, '03, Thomas E. Sears, '03, Mrs. Thomas E. Sears, Mrs. Clarence M. Joyce, Clarence M. Joyce, '03.

Museum of Science, which was especially planned for the youngsters. All in all, those participating in their quarter-century reunion had much to occupy them, and they appeared to enjoy themselves completely.

### Shore Dinner

On Sunday, June 14, the 25-year Class had a shore dinner in Walker Memorial, at which Faculty members who taught at the Institute 25 years ago and their wives were invited guests of the Class. About 420 persons attended this midday occasion which was made doubly festive by the presence of 110 Faculty and staff members and their wives.

At the conclusion of the shore dinner, Karl T. Compton, chairman of the Corporation, spoke on the major changes which had taken place at the Institute during the past 25 years, and reflected in the membership of the Corporation as well as elsewhere. Of 63 members of the Corporation at the present time (of whom the Governor, Chief Justice, and the Commissioner of Education are officers of the Commonwealth), only four were members of the Corporation in 1928. Dr. Compton pointed out three particularly significant events which have taken place during the past decade, as follows: (1) An educational survey, for the purpose of making a fundamental study of the Institute's role in technological education in this century, had been completed by the Faculty, and recommendations of the Faculty survey are now in operation; (2) in order to meet the expanding needs of the Institute in higher education and research, and to provide a more desirable and pleasant environment, the Development Program was put into operation and has raised \$26,000,000 during the intensive portion of its operations; the Development Office continues in operation, and through its efforts the Institute's endowment is steadily growing; (3) a new era of leadership has emerged with the splendid co-operation of the president, vice-presidents, deans, department heads, and other administrative officers in the Institute.

Following Dr. Compton, James R. Killian, Jr., '26, President, summarized his recollection of the Class of 1928 and acquainted the listeners with other changes that had taken place. He expressed appreciation to

the Class for the major contributions it had made as undergraduates in promoting student government at the Institute. He also enthusiastically endorsed the leadership which the Class had taken in developing an insurance plan that now provides a substantial gift to the Institute for endowment — the income of which is to be used for general purposes.

President Killian recalled that the Class of 1928 had contributed a number of persons to the Institute's staff at the present time, among whom are: Eugene W. Boehne, Professor of Electrical Engineering; Dr. John W. Chamberlain, Associate Medical Director; Robert S. Harris, Professor of Biochemistry of Nutrition; Augustus R. Rogowski, Associate Professor of Mechanical Engineering; Robert S. Woodbury, Assistant Professor of English and History; William H. Carlisle, Jr., Manager of Student Personnel. Finally, President Killian seemed to take special pride in announcing that he had been instrumental in inducing Ralph T. Jope, President of the Class of 1928, to join the staff of *The Technology Review* upon his graduation, and later, to take a very active part in the Institute's Development Program.

A symposium program was conducted by the Department of Electrical Engineering at which Dr. Vannevar Bush, '16 (standing), was the principal speaker. Seated from left to right are: Gordon S. Brown, '31, Head of the Department of Electrical Engineering, Julius A. Stratton, '23, Provost and Vice-president, Edward L. Cochrane, '20, Dean of the School of Engineering, and Samuel H. Caldwell, '25, Professor of Electrical Engineering.





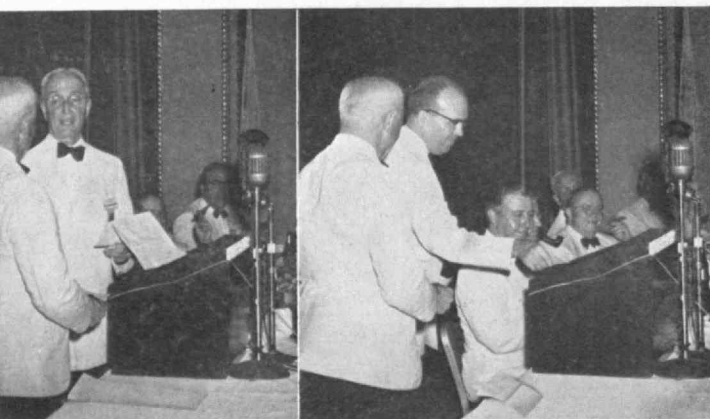
Seated at the table reserved for the Class of 1898 at the Alumni Day luncheon is Mrs. Karl W. Waterson at the end of the table, back to camera. To her left and continuing in clockwise order are: Dr. Alice M. Tallant, '98, Mrs. K. V. R. Lansingh, Lester D. Gardner, '98, K. V. R. Lansingh, '98, Mrs. Ernest F. Russ, Mrs. Howard L. Bodwell, Howard L. Bodwell, '98, M. De Kay Thompson, '98, Mrs. Arthur A. Blanchard, Miles S. Sherrill, '99, Daniel W. Edgerly, '98, Edward N. Milliken, '98. Far to near, on right-hand side of table are: Fred B. Dawes, '98, Carl S. High, '98, Elliott R. Barker, '98, Miss M. L. Chapin, Edward S. Chapin, '98, Karl W. Waterson, '57, Karl W. Waterson, '98, Edmund C. Little, '98, Ernest F. Russ, '98, Frank B. Perry, '98, Miss Virginia H. Soutar, Paul B. Wesson, '98, and Miss Frances E. Curtiss.

Dr. Killian took occasion to emphasize changes that had taken place at M.I.T. during the past quarter century by citing statistics of its growth in several instances, as follows:

	1928	1953
Student body	2,700	5,100
Budget	\$3,120,000	\$46,500,000
Academic staff	467	1,456
Total staff (including D.I.C.)	978	6,000
Alumni	13,335	47,230

President Killian also announced that for the 11 months ending May 31, gifts to the Institute had amounted to \$5,336,888.90, of which \$2,600,000 has been invested, \$2,157,000 has been used for current operations, and \$500,000 has been set aside as unallocated funds. Since the end of the Development Fund the increase in endowment has been \$3,000,000. Significant contributions during the past year include \$1,000,000 from individual corporations, and \$500,000 from the Rockefeller Foundation. President Killian also announced that it is the aim of the Institute to

Dr. Karl T. Compton gratefully receives class gifts at the Alumni Day banquet. At the left, Frederic A. Eustis, '03, presents the gift of the 50-year Class and at the right Ralph T. Jope, '28, makes the presentation for the Class of 1928.



increase its current endowment by \$20,000,000 over the next five years.

As master of ceremonies at the shore dinner, Mr. Jope called on Professor Erwin H. Schell, '12, in charge of the Course in Business and Engineering Administration, to present his address, "The Promise of Tomorrow." Professor Schell's address was concerned primarily with the future outlook for members of the Class of 1928, and held up as prospect a particularly promising future for those who, he said, were entering "the afternoon of life."

James Donovan, chairman of the Reunion Finance Committee, then made a brief announcement during which silver cigarette cases for desk use were presented to Mr. Jope and also to George I. Chatfield in recognition of their 25 years of faithful service to the Class as President and Secretary, respectively. At the conclusion of the shore dinner, members of the Class crossed Memorial Drive to the Sailing Pavilion and took a short boat trip up the Charles River to the residence of the Dean of Students, where they were guests, at afternoon tea, of Dean and Mrs. E. Francis Bowditch.

### Meeting of Honorary Secretaries

At 5:30 P.M. on Sunday, June 14, the Faculty Club was the scene of a social gathering for 103 Honorary Secretaries, educational counselors and club officers, and 42 members of the Institute's staff. Among the Institute's ambassadors of good will who attended this meeting were a number from distant parts of the world. From Tokyo came Yoshinori Chatani, '22, to claim the long-distance record, but Gustavo A. Calleja, '43, of Havana, and Constant W. Chase, Jr., '34, from the Canal Zone were also well in the running.

President Killian called on Dr. Compton who was given credit for initiating meetings of the Honorary Secretaries. Obviously pleased to record the work which the Honorary Secretaries are doing for M.I.T., Dr. Compton related how this group represented the Institute throughout the country and assisted with administrative officers in their selection of entering freshmen. Dr. Compton gave a good deal of credit for the concept of an organization of Honorary Secretaries to Professor Schell.

As dean of the Institute's latest school, E. P. Brooks, '17, brought the audience up to date on the formation and operation of the School of Industrial Management. Dean Brooks was careful to point out that in many respects the School is not a new concept at M.I.T. since, through Course XV, the Institute has



had an interest in industrial management since 1912. Nevertheless the formation of the new School gives the Institute opportunity to expand its activities in industrial management. A major aim of the School is to integrate its activities with the general technical training which is the backbone of M.I.T. training. Dean Brooks pointed out that the School is particularly interested in attracting students who have demonstrated their ability to lead people. He stated that students from 30 engineering schools will be represented in the student body next year, and that the Honorary Secretaries could be of service in aiding in the selection of suitable candidates at both the undergraduate and graduate levels.

One of the most difficult tasks confronting the new School has been the development of an effective bridge between the classroom and industry. Through extracurricular activities many undergraduate students obtain some experience in management on the campus. Students frequently visit manufacturing plants, and during the past year the president of one firm asked that students review and report on certain problems in his plants. Contacts with industry are also maintained by many Faculty members who are consultants for individual firms. In addition, seminars conducted by individual leaders help to acquaint students with problems of industry.

Dean Brooks felt that the effectiveness of students in their first jobs might be increased if industry were able to put into effect the following points: (1) graduates should be watched with sufficient care and understanding so that they do not gain the impression that they are lost, particularly in large organizations; (2) it appears desirable to give the graduates assurance that they will be working for their first job for a limited period of time and to offer opportunity for change after a year or two; (3) no special consideration should be given to students aside from the points already mentioned.

As the Institute's "Freshman Dean," Edward L. Cochrane, '20, Dean of the School of Engineering, reported the progress made during the past year and aimed to develop the strength of the Institute's Schools without creating vertical division according to subject matter. Dean Cochrane spoke particularly of the changes which have come about recently in student housing, in extracurricular activities, and better student-faculty relations — all of which had been directed to humanizing the M.I.T. environment.

As the final speaker of the evening, President Kilian developed the thought of humanizing the Institute and took pains to point out that it was the M.I.T. policy to emphasize the development of the individual. A primary objective of the Institute's present activities is to promote a better and more thoroughly integrated educational community. In part, this objective is being fostered through such physical facilities as the residential apartment house at 100 Memorial Drive (which houses a score or more mem-



Three members of the Class of 1896 enjoy informal conversation during lull in Alumni Day banquet activities. Left to right are: Dr. John A. Rockwell, '96, Paul W. Litchfield, '96, and Myron E. Pierce, '96.

bers of the M.I.T. family) and the Faculty Club which, with a membership of 1,200, triples the estimated membership of 400, made before the new club rooms were available. In developing the academic and residential facilities on a long-term basis, plans are to use the land east of Massachusetts Avenue for research and educational activities, whereas land west of Massachusetts Avenue is to be set aside for student residences, athletics, and a center for student activities. Present plans call for the establishment, on land west of Massachusetts Avenue, for a shopping area which will include a book store, bank, post office, drug store, and center for student government. Already a new auditorium is being erected on this land, and at its meeting on June 12, the Corporation approved the construction of a nondenominational chapel to provide a center for religious activities. Student-Faculty relations have been strengthened through the recent establishment of such rooms as the Dugald C. Jackson Room in the Department of Electrical Engineering, the Du Pont Room in Aeronautical Engineering, the Spofford Room in Civil Engineering, and the Commons Room in the new Metals Processing Laboratory. Considerable progress has already been made in developing M.I.T. as a residential college. The transformation of the old Riverside Apartment Hotel into a new dormitory (Burton House) dedicated last year, made it possible

Those in attendance at the Faculty table at the Alumni Day banquet (in clockwise order, from opening in foreground) are: Frederick G. Hartwell, Dean E. Francis Bowditch, Professor Walter C. Voss, '32, Wallace M. Ross, Delbert L. Rhind, Thomas P. Pitre, James W. F. MacDonald.





At the left are members of the 50-year Class at the Alumni Day banquet. In clockwise order are: George B. Bradshaw, '03, (in light coat with back to camera), Arthur B. Allen, '03, Clarence M. Joyce, '03, Andrew H. Hepburn, '03, Leroy B. Gould, '03, James A. Cushman, '03, Emmor

H. Millard, '03, Charles L. Bates, '03, Hermon F. Bell, '03, Howard S. Morse, '03.

A quarter of a century of professional life seems not to have dampened the spirits of these members at one of the 1928 tables. In clockwise order from foreground opening are: Noel C. Olmstead, '28, Roland D. Earle, '29, (only hand and stein showing), Chester M. Day, '28, (only hand and stein showing), A. Wentworth Erickson, '28, William H. Carlisle, Jr., '28, Kenneth Dow, Albert W. Bridges, Frank M. Baldwin, and Carl J. Bernhardt.



for the Institute to guarantee each freshman a dormitory room on the campus. All freshmen are now required to live in a dormitory or fraternity house. A comparatively new requirement in housing which the Institute faces is that of providing living quarters for married students, since approximately 20 per cent of the Institute's students are now married. Since 1950, the student body has increased 62 per cent, and increase in floor space has been about 60 per cent. President Killian used these figures to emphasize the Institute's primary interest in increasing the intensiveness of its operations rather than merely increasing the numerical size of its student body.

### Alumni Day

Perfect weather greeted some 1,200 Alumni and members of their families who returned to the Institute to attend the departmental reunions, the luncheon in Du Pont Court, the dedication of the World War II Memorial, the reception at the President's House in Cambridge, as well as the annual Stein-on-the-Table Banquet at the Hotel Statler in Boston, on June 15.

As usual the registration desk in the lobby of Building 7 was the scene of most of the morning activities until 10:30 when the Departments of Aeronautical Engineering, Biology, Chemical Engineering, Civil Engineering, Electrical Engineering, Food Technology, Industrial Management, Mechanical Engineering, and Naval Architecture and Marine Engineering held informal open house receptions. The new John Thompson Dorrance Laboratories of Biology and Food Technology, which were formerly dedicated on June 25, were open for inspection and members of the staffs of both departments were on hand to welcome visitors. *The Review* hopes to present a description of these new laboratories early next fall.

### Course VI Reunion

Renovated laboratories in the Department of Electrical Engineering were also open to visitors. In the Department of Electrical Engineering the departmental activities were centered around a program of dedication of new and expanded laboratory facilities in Building 10 (made possible by transfer of the Department of Biology and Food Technology to the Dorrance Laboratory) and a symposium-discussion on new methods of teaching professional work in modern electrical engineering. Julius A. Stratton, '23, Vice-president and Provost, acted as master of ceremonies in the dedication exercises at which the speakers were: Vannevar Bush, '16, President of the Carnegie Institution of Washington; Professor Gordon S. Brown, '31, Head of the Department of Electrical Engineering; and Admiral Edward L. Cochrane, '20, Dean of the School of Engineering.

In opening the dedication ceremonies, Dr. Stratton recalled the state of affairs in the Department in 1920 when he first became associated with M.I.T. This period was a particularly critical era in the Institute's history, since President Richard C. Maclaurin died suddenly and some time was required to find a successor. In addition, more than 1,000 freshmen entered the Institute, and facilities for this unusually large entering class were quite inadequate. Nevertheless, Course VI was under the leadership of some very able men of whom Dr. Stratton mentioned particularly Dugald C. Jackson, Arthur E. Kennelly, and Frank A. Laws, '89.

In his dedication address Dr. Bush took occasion to welcome friends of M.I.T. and those members in the audience who had been associated with the Department in the past, and mentioned in particular, Redfield Proctor, '02, Ralph G. Hudson, '07, and Richard D. Fay, '17, all of whom are still closely

(Continued on page 538)

# THE INSTITUTE GAZETTE

PREPARED IN COLLABORATION WITH THE TECHNOLOGY NEWS SERVICE

## *Dorrance Building Dedicated*

**T**HE John Thompson Dorrance Building to house the Departments of Biology and Food Technology at the Institute was dedicated on June 25 at exercises attended by distinguished biologists and food technologists from various parts of the world. George R. Harrison, Dean of Science, presided at the dedication ceremonies at which Oliver G. Willits, Vice Chairman of the Board of the Campbell Soup Company (which provided a large part of the funds for construction of the building) presented it to the Institute. James R. Killian, Jr., '26, President of the Institute, Francis O. Schmitt, Head of the Department of Biology, and Bernard E. Proctor, '23, who heads the Department of Food Technology, accepted the building.

The dedication address was delivered by Detlev W. Bronk, President of Johns Hopkins University and President-elect of the Rockefeller Institute for Medical Research. The dedication exercises were followed by a luncheon, and scientific symposia on "Perspectives in Quantitative Biology" and "Global Concepts of Food Technology."

In accepting the new building on behalf of the Institute, Dr. Killian stressed the importance of the new facilities for the Departments of Biology and Food Technology. "In biology," he said, "the progress now taking place is great in its impact and its promise. New instrumentation techniques and insight are bringing biologists closer to solving the riddle of life itself. Even though they may never solve it, they can enormously advance our understanding of ourselves. Biophysics and biochemistry are making major contributions to medicine and health, and this new building can help to increase the pace of this advance." Speaking of the progress of food technology, Dr. Killian stressed the revolutionary changes that have been brought about in this field. He predicted new discoveries in food technology of the greatest consequence to the future of mankind. "Most of these," he said, "we cannot anticipate, but we can be sure they will come."

Speaking for the Department of Biology, Dr. Schmitt said, "Our Department has been concerned very largely with what might be called 'biology at the molecular level'; with the application to biological problems of the quantitative methods of physics and chemistry. This has proven most profitable and we may confidently predict that advances in this field in the next few decades will far outstrip the past discoveries in their significance for biological science. As we come nearer to an understanding of the detailed structure and composition of proteins, nucleic acids, and other natural large molecules, we draw much closer to a solution of such great problems as the

mechanisms of immunology, genetics, growth and development. As we learn more about the biosynthesis of cellular components and about the metabolic reactions which provide the energy to run the molecular machinery of the cell, we hasten the day when real progress will be possible in the control of the degenerative diseases." Speaking of the goals of the biologist, Dr. Schmitt stressed the need for new knowledge of the problem of muscle contraction, of nerve conduction, and the orderly processes of growth and development.

Speaking for the Department of Food Technology, Dr. Proctor recalled the enormous importance of the early work in this field carried on by Dr. Samuel C. Prescott, '94, for many years a leader in methods of food preservation. Speaking of the future, Dr. Proctor outlined some of the stimulating problems in which lie rich promise of great advances in the science of manufacturing and preserving foods. He noted that the new facilities at M.I.T. should contribute to more rapid progress in research on various projects.

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Erwin H. Schell, '12, Head of the Department of Business Administration and Engineering, and a staunch supporter of collegiate sailing, takes a vantage point atop the Sailing Pavilion as Mrs. Schell christens one of the Institute's new fleet of Fiberglas dinghies. Many Technology sailors returned to the Institute on May 9 for the christening ceremonies, and wound up a day of water sports with dinner at the Faculty Club.



## Building Construction Becomes Course in Civil Engineering

APPOINTMENT of Albert G. H. Dietz, '32, as Acting Head of the Course in Building Engineering and Construction at M.I.T., has been announced by James R. Killian, Jr., '26, President. Dr. Dietz will succeed Professor Walter C. Voss, '32, who retires this June but who will remain at the Institute as professor emeritus and lecturer.

Beginning July 1, the Course in Building Engineering and Construction will operate as part of the Department of Civil and Sanitary Engineering and its instructing staff will be included in this Department. In making this announcement, President Killian said:

Because the building construction industry occupies such a vital place in the social and economic structure of our country, it is important that this phase of the Institute's activities be developed to the fullest extent possible. Related as it is to both Civil Engineering and Architecture, it is nevertheless essentially engineering in character. For this reason the course will become affiliated with Civil Engineering, but a close liaison with Architecture will be maintained.

Dr. Dietz was educated at Miami University and at M.I.T., where he was awarded his doctorate in 1941. Appointed instructor in 1938, he was promoted to assistant professor of structural engineering in 1941, associate professor in 1946, and full professor in 1950. During World War II he was on leave of absence from M.I.T. for special work with the Office of Field Service, Office of Scientific Research and Development. For his outstanding service in this connection, Dr. Dietz was awarded a certificate of appreciation from the Army and Navy in 1948. In 1950, he was appointed to the Civilian Defense Organization Committee and the Governor's Advisory Council on Civil Defense in Massachusetts. In June, 1951, Professor

As guests of Pierre S. duPont, '90, several hundred members of the M.I.T. Club of Philadelphia held their annual meeting, on May 9, at Longwood Gardens, the estate of Mr. duPont. Shown at the festive board, during this magnificent Alumni meeting are (in usual order), Samuel K. McCauley, '41, Secretary of the M.I.T. Club of Philadelphia, Pierre S. duPont, generous and genial host, and Mrs. Samuel McCauley.

Richard S. Mooney



Dietz was appointed to a commission on engineering education to go to Japan for consultation with the Japanese Ministry of Education, as recorded in the May, 1952, issue of *The Review*.

Dr. Dietz is a member of the American Society of Civil Engineers and the American Society for Testing Materials. He has lectured extensively and is editor of a book entitled *Engineering Laminates*. He is also the author of *Dwelling House Construction*, and of *Materials: Wood, Plastics, Fabrics*.

Professor Voss joined the M.I.T. staff of the Department of Building Engineering and Construction as an associate professor in 1928. In 1931 he was appointed professor and in 1940 he became head of the Department. He has been a consultant in architectural construction and materials since 1919, and is a licensed architect, master builder, and registered engineer.

Professor Voss is a graduate of the Chicago Teachers College where he was a scholarship student and from the University of Illinois where he received the degree of bachelor of science in architectural engineering with both preliminary and final honors in 1912. He also holds the degree of master of science from M.I.T.

He is coauthor of *Concrete Work, Architectural Construction, Wood Construction, and Steel Construction*; author of *Fireproof Construction*; and editor of *Construction Series*. His field of special research interest is masonry materials.

## Lowell Commencement

THE 49th graduation exercises of the Lowell Institute School were held at the Institute on Thursday, May 28, at 8:15 P.M.

The principal address was given by Linnell E. Studley, Vice-president in charge of production for the New England Confectionary Company and factory manager of the Cambridge plant. Certificates were awarded by Dr. Ralph Lowell, President of the Boston Safe Deposit and Trust Company, sole trustee of the Lowell Institute School, and a member of the Corporation of M.I.T.

One of the high lights of the program was the eighth presentation of the Charles Francis Park Medal, which bears the name of the first director of the School and was awarded for excellence in the course to James T. Martin, Jr., of Calthrope Road, Marblehead. Mr. Martin, who is president of his class, is a graduate of Marblehead High School and is employed as an apprentice at the General Electric Company in Lynn.

The citation accompanying the Park Medal was read by Francis J. Emery, a graduate of the Lowell Institute School with the class of 1913, and now Director of Industrial Arts for the Boston School Committee. Professor Arthur L. Townsend, Director of the Lowell Institute School and Associate Professor of Mechanical Engineering at M.I.T., presided.

Admiral Edward L. Cochrane, Dean of Engineering at M.I.T., under whose auspices the Lowell Institute School operates, brought the greetings of President James R. Killian, Jr., and the M.I.T. Corporation to the graduates.

# In The Emeritus Ranks



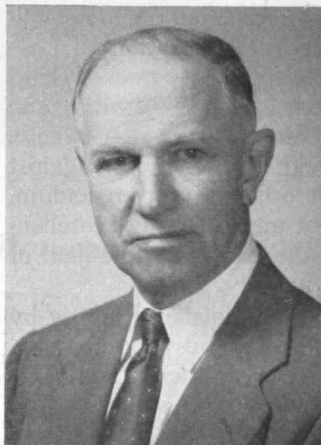
E. Buckingham



O. F. Hedlund



R. McG. Lane



J. M. Lessells



E. B. Millard



M. S. Smith



W. C. Voss, '32

FOUR members of the Institute's Faculty, two members of the library staff, and three men closely associated with student extracurricular activities will retire this summer after long service at M.I.T. In alphabetical order the nine are: Earle Buckingham, Professor of Mechanical Engineering; Oscar F. Hedlund, track coach; Sanfrid K. Johnson, athletic trainer; Mrs. Ruth McG. Lane, Vail Librarian; John M. Lessells, Associate Professor of Mechanical Engineering; Earl B. Millard, Professor of Chemistry and Secretary of the Faculty; Wallace M. Ross, Secretary, Technology Christian Association; Miss Marian S. Smith, Reference Librarian; and Walter C. Voss, '32, Head of the Department of Building Engineering and Construction.

Professor Buckingham joined the Department of Mechanical Engineering as associate professor of Engineering Standards and Measurements in 1925. He became professor of Mechanical Engineering in 1931. He will continue next fall as Emeritus Professor of Mechanical Engineering as lecturer in his Department.

Professor Lessells came to M.I.T. in 1936 as associate professor of Mechanical Engineering. He was on leave of absence between 1943 and 1945 for work with the British Ministry of Supply Mission to the United States for consulting work. Professor Lessells will serve his Department next fall as part-time lecturer.

This year Professor Millard ends service to M.I.T. which began with his appointment as instructor of Inorganic Chemistry in 1914. He became assistant professor of Theoretical Chemistry in 1916, associate professor in 1922 and professor in 1929. In addition, from 1922 to 1935 Professor Millard served as assistant director of the Institute's Division of Industrial Cooperation.

Head of the Institute's Department of Building Engineering and Construction since its re-establishment in 1940, Professor Voss came to M.I.T. as associate professor in 1931. In 1931 he became professor and will devote part time, next year, as lecturer in the Department of Civil Engineering.

Miss Smith, a graduate of Simmons College, is the only librarian who has served the library in three different homes—in the Rogers Building in Boston, in the dome of Building 10, and most recently, in the new Hayden Library. With the exception of one year during which she served as technical librarian with the DuPont organization, she has been at M.I.T. since 1912. After July 1, Miss Smith will serve as Reference Librarian Emeritus and will study the Institute's library services to industry.

Mrs. Lane holds degrees from Wellesley College, Simmons College and Harvard University. Although active in several engineering educational and library associations and a frequent contributor to library and engineering literature, Mrs. Lane is best known as guiding spirit in the Vail Library of Electrical Engineering, one of the world's greatest collections in its field. Mrs. Lane becomes Vail Librarian Emeritus and will work with Professor Richard H. Frazier, '23, in a program to extend the effective use of the collection in electrical engineering.

Oscar F. Hedlund, track coach, Sanfrid K. Johnson, athletic trainer, and Wallace M. Ross, for 34 years general secretary of the Technology Christian Association, are well-known to generations of Technology students. All three men retire at the end of the school year with the best wishes of the many students who benefited from their interest and guidance. Photographs of Messrs. Ross and Johnson appear on pages 480 and 494 respectively.

## Smith Joins Sloan School

MASON SMITH, since 1940 a partner in A. T. Kearney and Company, Chicago management consultants, has been appointed professor of industrial management in the School of Industrial Management at M.I.T., according to E. P. Brooks, '17, Dean of the School. Mr. Smith's appointment will become effective on June 1. He was formerly director of personnel at Marshall Field and Company in Chicago, and is a past president of the National Association of Cost Accountants.

After receiving the degrees of bachelor of science and master of business administration from the Northwestern University School of Commerce, Mr. Smith served successively on the faculties of the University of Georgia (1925-1926), Northwestern University (1926-1927), and Ohio State University (1927-1929).

From 1929 to 1931 he was assistant secretary of the National Association of Cost Accountants, and from 1931 to 1933 he was assistant professor in the School of Commerce at Northwestern University. He later served as a staff member with James O. McKinsey and Company, management consultants, Chicago (1933-1935); assistant general manager of operations, The Kroger Company, Cincinnati; and director of personnel, Marshall Field and Company, Chicago (1937-1940). Professor Smith has spoken extensively throughout the country, and has contributed numerous articles to professional journals.



Koehne Photo

**Mason Smith**

*Professor of Industrial Management*

## History and Literature in French

A grant of \$19,300 from the Rockefeller Foundation, announced by John E. Burchard, Dean of the M.I.T. School of Humanities and Social Studies, will make possible a unique experimental program to present in a foreign language the two-year basic courses in history and literature at the Institute.

Beginning next fall, up to 10 students entering M.I.T. with complete high school preparation in French may choose to study the first year's program in ancient, medieval, and Renaissance history and literature in the French language, from French source materials.

In 1954-1955, during their sophomore year, these students will continue their studies in French of more recent political, philosophic, and cultural concepts; and a larger group of up to 25 qualified freshmen will begin the first year of the two-year program.

The result, according to William N. Locke, Head of the Department of Modern Languages, "will be the first program in the United States, so far as we know, in which the French language can be studied against the wide background of a full cultural curriculum. We will provide a course of unusually high intellectual maturity to challenge the especially qualified of our entering students," he says.

The new program will be administered jointly by the Departments of Humanities and Modern Languages. Close co-operation between them, Dean Burchard believes, will be necessary to the success of the program.

Only students who appear to be adequately prepared for the program, and who volunteer to participate in it, will be assigned to the French language courses. They will cover the same subjects as those in the regular sections in the humanities curriculum conducted in English and will be fulfilling the humanities requirement of all M.I.T. students. Students who wish to switch from French to English language sections will be able to do so at any time during the year.

All lectures will be given in French, and materials which are used in English translations by the regular sections will be assigned in French translation for the experimental group. But the class discussions will be in English, and students will write their papers and examinations in English — at least during the first several months of the two-year program. This seems necessary, according to Professor Locke, to assure that the language will not be a barrier to the students' full comprehension of the course material.

During the last two years at M.I.T., while concentrating their work in one of the Institute's 20 fields of science, engineering, management, or architecture and city planning, these students may continue their French language studies by choosing from several courses in French literature offered in the Department of Modern Languages.

The student who makes this choice, Professor Locke believes, will have "the equivalent of a very fine major in French as well as his professional major in a science or engineering field, in the time usually required to achieve only one of these goals."





U. S. Navy Photo

## Washington Regatta

The Nation's Capital was the scene of the Eighth Annual Eastern Association of Rowing Colleges in which 32 crews from 13 colleges took part in the heavy-weight spring championships. The Institute's junior varsity and varsity crews came in fifth and sixth in the morning heats but an improvement of but 10 seconds would have made them winners. Shown, left to right, are Rudolph Kaufmann, Washington Evening Star; Captain Elliot W. Parish, Jr., U. S. Navy; Rear Admiral A. H. Van Keuren, '07, President, Washington Rowing Association; Edward J. Kelly, Director, Washington Rowing Association; and Robert K. Thulman, '22, representing the Washington M.I.T. Alumni Club. Trophies, left to right are Evening Star trophy, Richard Glendon trophy and the Rowe Cup, established by Charles Hayden, '90, in honor of the late Dr. Allan Winter Rowe, '01.

## Management Fellowships

THE award of 10 fellowships for graduate study in the School of Industrial Management at the Institute during 1953-1954 has been announced by E. P. Brooks, Dean of the School. The awards were made to students with undergraduate degrees in science, engineering, or engineering administration who appeared to the awards committee to have great potential for future leadership in business. This decision, Dean Brooks said, was based upon such factors as outstanding scholastic performance, demonstrated initiative and leadership ability, evidence of high moral and ethical standards, and favorable personality traits.

The fellowships will include full tuition in the School, and some carry additional cash stipends of up to \$2,100 for married men and \$1,400 for single men.

Three fellowships are continued for 1953-1954 to students who have been Fellows in the School during the current year: John Davidson, B. Sc., (in Mechanical Engineering), University of Durham, England; University of Kansas; James C. Emery, B. Sc. (in Chemistry), University of Arkansas; Winston R. Hindle, Jr., B.A. (in Physics), Amherst College.

Seven Fellows will begin work under the fellowship program in the School of Industrial Management in September, 1953: Charles L. King, B.E. (in Chemical Engineering), Vanderbilt University; Gerard J. Kirchner, B. E. (in Industrial Engineering), Johns Hopkins University; Bernard Lachapelle, B.A.Sc. (in Civil Engineering), Engineer, Ecole Polytechnique, University of Montreal. Jawahar I. Mehta, B.Sc. (in Chemistry), Gujarat College; B.Sc. (in Chemical Engineering), University of Bombay, B.M.E. (in Management Engineering), Rensselaer Polytechnic Institute. Roger K. Olen, B.Sc., B.E.E., University of Minnesota. Zenon S. Zannetos, B.A. (in Mathematics), University of Kansas. Frederick Zwerling, S.B. (in Business and Engineering Administration), M.I.T.

## R.O.T.C. Awards

THIRTY outstanding cadets of the Departments of Military Science and Air Science at the Institute were given R.O.T.C. awards and medals at a Military Review held May 14, on Briggs Field. James R. Killian, Jr., '26, was the Reviewing Officer.

Important dignitaries in the reviewing stand with Dr. Killian included Major General Roderick A. Allen, U.S.A. Commanding General, Fort Devens and Boston Army Base; Major General R. C. Maude, U.S.A.F., Commanding General, Cambridge Research Center; Brigadier General Charles E. Loucks, Cal C, Deputy Chief Chemical Corps, Washington, D.C.; Colonel Bernard F. Hurless, Infantry, Commandant, A.S.A. Training Center, Fort Devens; Colonel Leo A. Bessette, Infantry District Chief, Massachusetts Military District, Army Base, Boston; and John E. Burchard, Dean of Humanities and Social Studies, M.I.T.

Also in the reviewing stand were Colonel Charles F. Baish, '21, Professor of Military Science, Glenn C. Coleman, Professor of Air Science, M.I.T.; Paul F. Hannah, Vice-president of Raytheon Corporation, Waltham; Brigadier General James F. McManmon, U.S.A.F. retired; Colonel Francis E. Kidwell, Sig. C, Signal Officer, First Army, Governors Island, New York; Edwin T. Morrell, Secretary, Massachusetts Wing, A.F. Association; Philip Foss Lackey, Secretary, S.A.R., Boston; and Major Raymond T. Palmer, U.S.A.F. Reserve.

Cadet Colonel Stanley Lenard, Chemical Corps, Army, and Cadet Lieutenant Colonel Gilbert D. Gardner, Air Force, received respectively, the Reserve Officers Association Senior Army Cadet medal and Senior Air Force Cadet medal for military and academic achievement. Cadet Lieutenant Colonel Ralph H. Sievers, Jr., Corps of Engineers, Army, and Cadet Colonel Leroy G. Malouf, Air Force, received respectively, the Senior Army Cadet medal and the Senior Air Force Cadet medal for general excellence.

The first sailing for the Sir Thomas Lipton Memorial Trophy was held on the Charles River Basin in the new M.I.T. Fiber-glas dinghies on Monday, June 22. The Lipton Trophy is a new trophy which was given to the Intercollegiate Yacht Racing Association of North America by Robert Bartly Smallwood, President of Thomas J. Lipton, Inc. Karl T. Compton, Chairman of the M.I.T. Corporation, acted as intermediary in the acceptance of the gift at the February meeting of the New England branch of the Intercollegiate Yacht Racing Association. The trophy is for intersectional racing between the four geographical regions of the United States, and will be held each year in connection with the national championships. In 1953 the national championships were held on June 17, 18, and 19 at the U. S. Merchant Marine Academy, Kings Point, New York. Harvard was the winner of this event, and M.I.T. was tied for second place with the U. S. Naval Academy midshipmen from Annapolis. The two teams from the Pacific Coast—Claremont-Pomona Colleges and Stanford University—travelled to Boston to meet Harvard and M.I.T. for the Lipton Trophy. The New England teams took all four of the matches—four out of seven series. As photographed at the M.I.T. Sailing Pavilion, sailors who took part in the June 22 races are (back row, left to right): Horatio Garcia, '54, M.I.T., George Robertson, Harvard, Kimberly Munholland, Claremont-Pomona Colleges, Charles Merrill, Stanford, Bruce Young, Claremont-Pomona Colleges; (front row, left to right): James Nathanson, Harvard, Edward M. Melaika, '53, M.I.T., Llewellyn Boxby, Claremont-Pomona Colleges, and Paul Merrill, Jr., Stanford. The Merrill brothers are sons of Paul C. Merrill, '22.



## Ship Models and a Liberal Education

EDWIN D. RYER, '20, President of the Alumni Association, called to order the 296th meeting of the Alumni Council at the Faculty Club, on Monday, April 27, at which 122 members and guests were present.

Donald P. Severance, '38, Secretary, reported that the Audit and Budget Committee and the Executive Committee had approved a budget of \$41,097 for the coming fiscal year; that the ballots for officers of the Alumni Association had been counted (with results as indicated on pages 514 and 550); and that during April, seven members of the M.I.T. family had visited six M.I.T. clubs as far as Milwaukee and Detroit.

As Director of the Alumni Fund, Henry B. Kane, '24, reported that 8,915 Alumni had contributed \$189,000, and that there is every reason to believe that the previous total of \$206,600 will be exceeded. President Ryer also announced plans for Alumni Day, the events themselves of which are recorded beginning on page 499 of this issue of *The Review*.

James R. Killian, Jr., '26, President of M.I.T., was then called on to advise Council members on recent happenings at the Institute. Dr. Killian discussed the statement, issued by the American Association of Universities and to which M.I.T. is a signatory, setting forth policies with regard to academic freedom and Communism in institutions of higher learning. President Killian also discussed the problem which M.I.T. had to face when three of its Faculty members appeared in open meeting before the House Committee on Un-American Activities. A more detailed report on this subject appears on page 540 of this issue.

Edward L. Cochrane, '20, Dean of the School of Engineering and former Head of the Department of Naval Architecture and Marine Engineering, then introduced Professor Laurens Troost, present Head of that Department, who spoke on "25 Years of Ship Model Basin Work." In reviewing progress which has been made through the use of ship model tanks in the past quarter century, Professor Troost recalled that there had been a 25 per cent increase in efficiency due to hydrodynamic design, an increase of 15 per cent efficiency through substitution of welded for riveted hulls, and a 30 per cent improvement in fuel consumption of steam turbine installations, while use of aluminum alloy superstructures has made a 10 per cent saving in weight. The net effect is that smaller, lighter, narrower ships, requiring less power for a given speed, can now be built. This was illustrated by comparing the performance of the British ship, the *Queen Mary*, with the American vessel, the *United States*. Professor Troost pointed out the need for correlating data made in small tanks with data obtained on full-scale ships, so that small tanks could make greater contributions to marine engineering.

Final speaker of the evening was John E. Burchard, '23, Dean of the School of Humanities and Social Studies, who spoke on the liberal education of a specialist. Dean Burchard emphasized that the Institute has a first-class Faculty in the humanities, and pointed out that Technology students are required to take a co-ordinated humanities program for four years at the Institute, and mentioned that M.I.T. students are definitely above the national norm in ability to read with comprehension, but are somewhat below in variety and extensiveness of vocabulary.

(Continued on page 514)

# BUSINESS IN MOTION

## *To our Colleagues in American Business ...*

Late last year an important customer surprised us with an emergency call for help. It is a large company, and an unusually capable fabricator, so it is seldom indeed that it asks us for more than metals. Now it was not only having trouble, but was fast approaching a penalty period of \$2,400 a day for failure to deliver. The difficulty arose in butt-welding aluminum bronze to steel, so two of the men from the Welding Section of the Revere Research Department assembled their equipment and left at once. They found that the test specification called for welding 1½ inch plates, and then making a side bend without damage. This had nothing to do with the stress conditions which the pressure vessel would experience in service, but there it was, and welders had to be qualified by that test. Nobody had been able to pass it, which was why we were asked for collaboration.

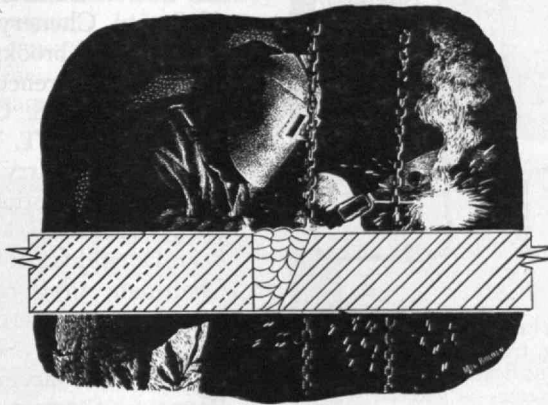
- Working closely with the customer, and with the inspectors assigned to approve the work, our welding engineers dug deep into this problem. On Saturday, Sunday and Monday five test plates were made, each showing a definite improvement, though extreme difficulty was experienced in getting a satisfactory joint at the root of the weld. This was due to the fact that the design called for a 25-degree bevel on the steel plate, and no bevel on the aluminum bronze. Good fusion was impossible at the root, as was proved when the bottom of a test piece was cut off; the upper three-quarters of the weld then made the side bend satisfactorily.

- After close mutual analysis of the problem, per-

mission was obtained to open the joint to a 60-degree angle, to correspond with the joint of the actual vessel. The following day welds of the joint were made without difficulty, and passed the severe test without question. The remainder of the week was occupied in setting up the welding equipment we selected, and instructing the customer's welders in the necessary procedures. One of the methods recommended involved the placing of the beads of weld

metal. Small beads were advised, and after each layer had been laid it was carefully power brushed to remove any oxides which otherwise might have caused planes of weakness.

- In all this work it was evident that our men were so obviously familiar with what they were doing, and with the practical limitations and opportunities of the job, that they were able to bring the customer and the inspectors together in a mutual meeting of minds, by showing how to make a weld which would withstand the test. Production began to meet schedules thereupon, just in time to avoid the \$2,400 daily penalty.
- Revere finds that operating a welding service of this kind is good business. It increases our contributions to American industry, and is in line with the recommendations we have given in these pages for many years. Namely, that you take full advantage of the knowledge of your suppliers, as well as buy their materials. No matter what you purchase, nor from whom, there must be one or more firms by whose experience you can profit, if you will just ask for it.



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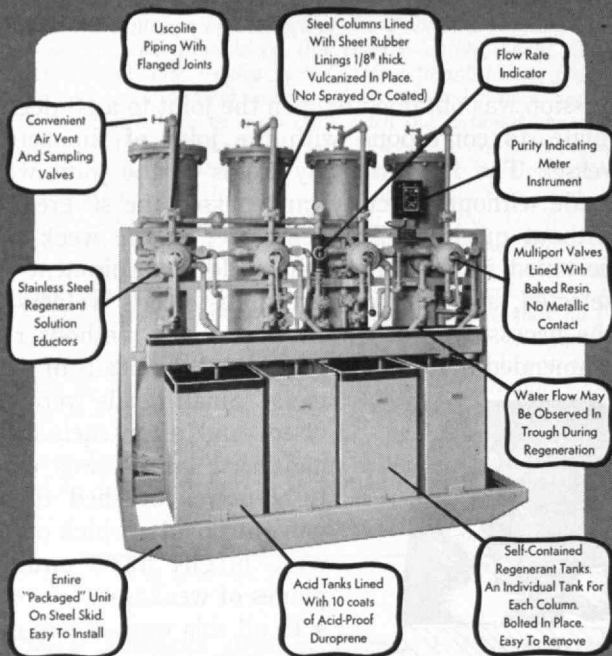
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## THE INSTITUTE GAZETTE

(Continued from page 512)

### Plans for an Auditorium

LAST Alumni Council Meeting of the present school year was called to order at 7:45 P.M. on Monday, May 25, at the M.I.T. Faculty Club, by Edwin D. Ryer, '20, President of the Alumni Association. At this 297th meeting, business was the order of the day for the 114 council members who listened to reports by Donald P. Severance, '38, Secretary and Treasurer, and H. E. Lobdell, '17, Executive Vice-president of the Alumni Association.

As first order of business, it was reported that between April 29 and May 25, seven members of the Institute's Faculty and staff had visited 12 M.I.T. Clubs within the area bounded by Toronto, Canada, Minneapolis, Duluth, St. Louis, and Philadelphia.

It was reported that, at its afternoon meeting, the Executive Committee voted the following committee nominations for Alumni Council consideration: *Audit and Budget*: Edwin D. Ryer, '20, C. George Dandrow, '22; *Boston Luncheon Club*: Robert L. Johnson, '38, Chairman, Chenery Salmon, '26, Vice-chairman, Vincent T. Estabrook, '36, Secretary-Treasurer; *Class Reunions*: Clarence R. Westaway, '33, William H. Carlisle, Jr., '28, Chairman; *Friends of the M.I.T. Library*: Ralph T. Walker, '11, Chairman, Henry L. Seaver, Staff, Harry H. Young, '91, Oscar H. Horowitz, '22, Melville Eastham, Caryl P. Haskins, Edward H. Davis, '01, Carl F. Muckenhoupt, '24; *Honorary Members*: Donald G. Robbins, '07, Samuel C. Prescott, '94, Chairman; *Advisory Councils*: Louis H. Flanders, Jr., '33, Chairman, Percy Bugbee, '20, Albert O. Wilson, Jr., '38, David W. Skinner, '23; *Departmental Visiting Committees*: Garvin Bawden, '21, James Donovan, '28, Raymond Stevens, '17, Chairman; *Alumni Council Representatives of M.I.T. Clubs*: Chenery Salmon, '26, Gilbert M. Roddy, '31, G. Raymond Lehrer, '24, Eric A. Bianchi, '29, Louis Rosenblum, '42, Chairman; *Personnel Committee*: William R. Jones, '49, Donald P. Severance, '38, Chairman.

The Executive Committee approved recommendations of the Alumni Fund Board that this year's balance of the Alumni Fund be added to the balance now in the custody of the Treasurer of the Institute. This will bring the cumulative unexpended total to approximately \$250,000.

Names submitted by the Committee for Nominations for Departmental Visiting Committees were also approved. As chairman of the Alumni Day, George W. McCreery, '19, reported on plans for the Alumni Day program. Instead of reporting those plans here, readers may find the record of accomplishment on pages 499 to 506 of this issue of The Review.

Mr. Ryer next called on President Killian who discussed the basic plan of M.I.T.'s physical plant. Consummation of present plans will result, ultimately, in the East Campus being devoted to education and research and the West Campus to living and recreational facilities. These remarks led very naturally to President Killian's warm introduction of Robert M. Kimball, '33, Director of Business Administration for

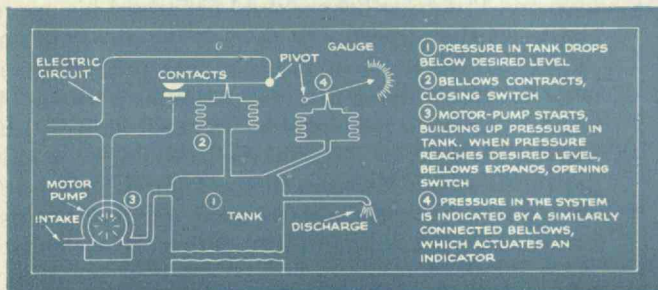
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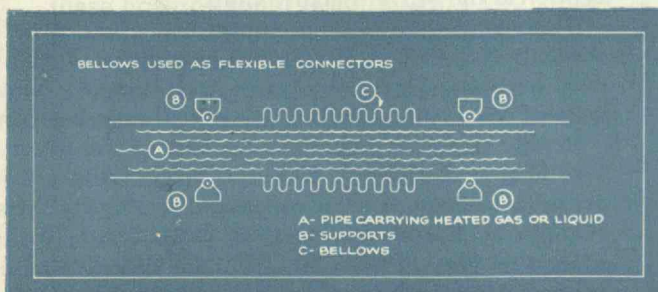
# 8 Ways

## Clifford bellows help you solve design problems

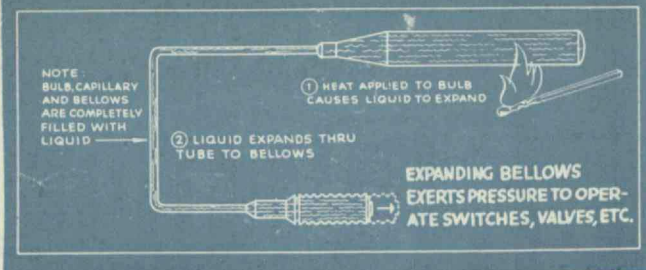
Perhaps you, too, can benefit from flexible, leak-proof, metallic Clifford bellows assemblies. For individual requirements in assembling bellows to fittings, Clifford is equipped to use new molecular bonding processes, resistance welding and heliarc-welding. Write direct for complete details on how Clifford bellows assemblies can help you. Clifford Manufacturing Company, 142 Grove Street, Waltham 54, Massachusetts. Division of Standard-Thomson Corporation. Sales offices in New York; Detroit; Chicago; Los Angeles; Waltham, Mass.



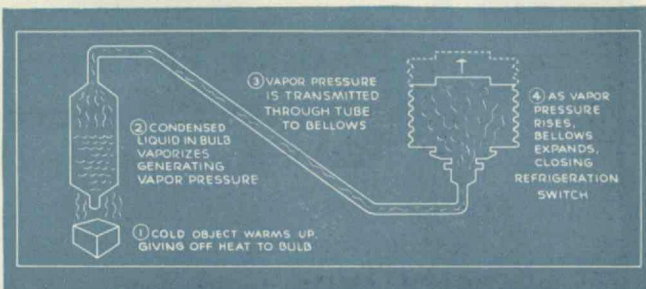
**Controlling and/or indicating pressure.** Clifford Hydron bellows assemblies provide close control and accurate indication in pressure systems. Pressure, exactly equal throughout the system, is immediately exerted on bellows which respond without lag. Common applications: instruments to control temperature, pressure, flow rates, liquid level.



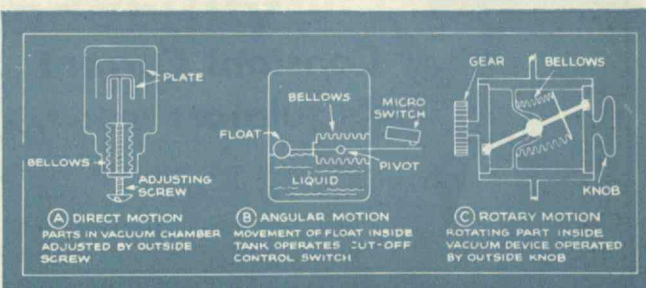
**Allowing for thermal expansion** in flexible piping. Clifford bellows compensate for dimensional changes caused by heated gas or liquid that would expand and buckle ordinary piping... without imposing excessive strain on supports. Sidewise movement of supports with respect to each other is also permitted.



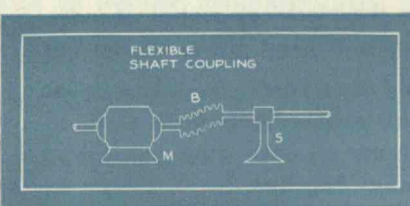
**Controlling wide range of temperature** with one adjusting device. Liquid filled Clifford bellows assembly permits one knob to adjust temperatures by remote control from 200° to as high as 650° or 700°. Common applications: domestic and industrial oven controls.



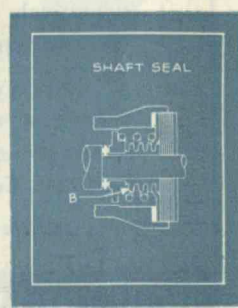
**Controlling narrow range temperatures.** Vapor pressure Clifford bellows system forms temperature control unit used in thermostatic devices. This device can be designed to be "fail safe" to prevent overheating even if bellows fails to function. Adjustment commonly limited to lower range than liquid filled system. Applications: refrigerator controls, auto thermostats, tank regulators.



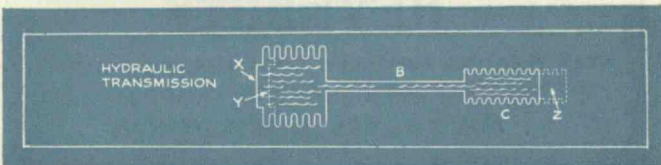
**Transmitting motion from one medium to another** while maintaining a hermetic seal. The inherent flexibility of leakproof Clifford Hydron bellows permits extension, retraction, rotary motion or combinations of these to be applied while hermetically sealing unit's internal elements. (A) shows direct motion, (B) shows angular motion, (C) shows rotary motion.



**Operating as flexible shaft coupling.** Clifford bellows assemblies provide constant velocity torque and compensate for misalignment.



**Operating as shaft seal.** Clifford bellows seal in gases and liquids and prevent leakage around rotating shafts.



**Operating in hydraulic transmission systems.** Clifford bellows approximate frictionless lever-action for transmitting force in remote control systems.



the Institute, who outlined the planning of the Kresge Auditorium for which construction was begun, west of Massachusetts Avenue on land adjacent to Bexley Hall. The new structure will provide a main auditorium seating 1,200 persons, and a smaller auditorium seating 200 persons. Facilities will also be provided for dressing rooms, rehearsal rooms, stage settings, and the building is so constructed that a parking place for 400 automobiles can be provided. The most unusual feature of the structure designed by Eero Saarinen is its spherical triangular shape, which eliminates columns and requires a minimum of steel. A committee representing points of view of the administration, the students, the various groups who are expected to make the greatest use of the auditorium, together with specialists in architecture, heating and ventilating, and air conditioning, have given the structure careful study. Accordingly, it is anticipated that the new auditorium will be eminently successful in meeting a pressing Institute need for a suitable meeting place for groups larger than can be accommodated in Huntington Hall.

Final speaker of the evening was Jacob Brownowski, Carnegie Professor of History, who is on leave from his post as director of research for England's coal industry. Professor Brownowski expressed his appreciation at the opportunity to visit the Institute and stated that his work in England was primarily concerned with obtaining first class scientific personnel to work on research problems for the coal industry. Industrial research in England, he said, does not have the status which it enjoys in the United States, and while personnel is available for academic posts, British industries do not ordinarily attract first class scientists.

### Choral Group

THE 20th anniversary of the Technology Matrons' and Dames' Choral Group was celebrated Friday evening, May 15, with an invitation concert and reception at the M.I.T. Faculty Club.

The choral group's 38 members are wives of both students and staff at M.I.T. and include guest members from the Harvard Dames and Harvard Newcomers Association. Participating in the spring concert were two active charter members of the society. Mrs. George Scatchard, Associate Professor of Music at Smith College, is chairman and director; and Mrs. Wallace M. Ross is accompanist. Guest artists at the concert on May 15 were Mrs. William Weems, violinist, and Mrs. Archibald Adkins, pianist. Soloists for the choral group are Mrs. Albert Dietz, Mrs. Richard Lawrence, Mrs. Donald McLean, and Mrs. O. William Leidel.

This year the Technology Matrons' and Dames' Choral Group has sung at the Baptist Church, Brookline; the Harvard Women's Association of Greater Boston; the Metropolitan and Massachusetts General hospitals; the Matrons' Christmas Tea at the home of President and Mrs. James R. Killian of M.I.T.; and at a meeting of the Harvard Dames.

(Continued on page 518)

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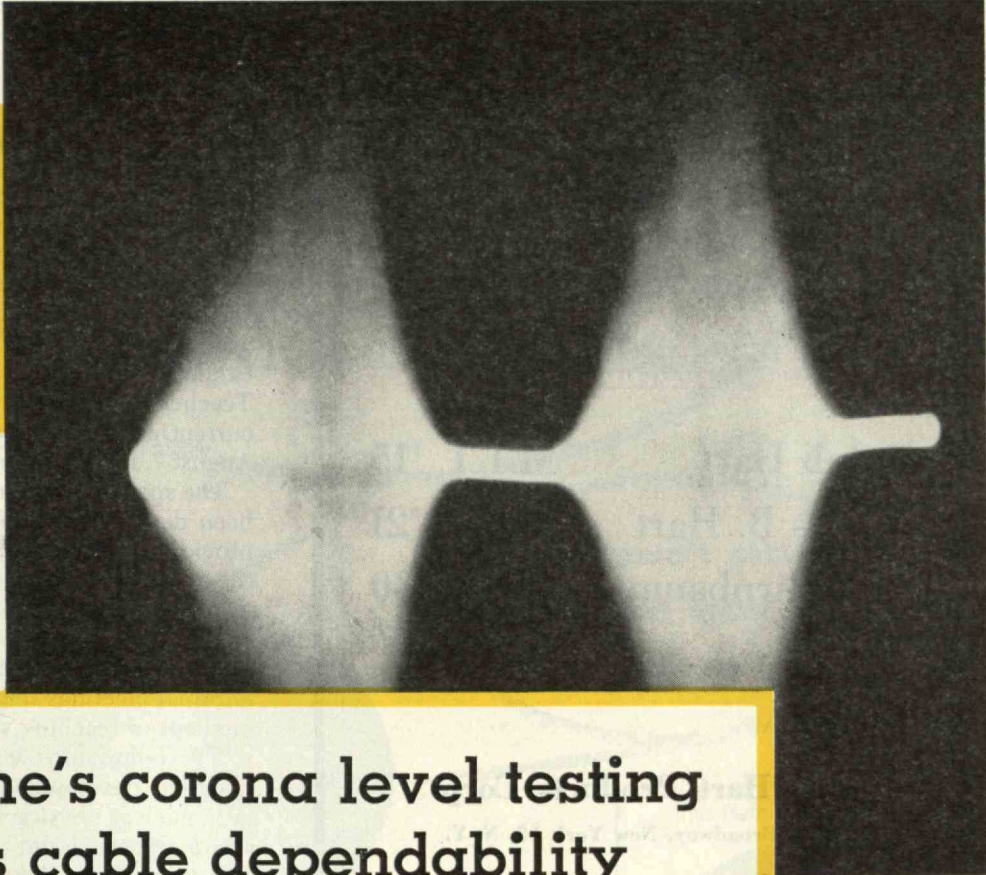
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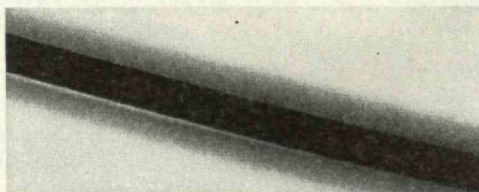
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## THE INSTITUTE GAZETTE

(Continued from page 516)

### Science for High School Teachers

FIFTY-FOUR science teachers from secondary schools in 26 states and the province of Alberta in Canada were named on May 2 as winners of Westinghouse Fellowships to a special summer program at the Institute. The fellowships have been awarded from a grant established in 1949 by the Westinghouse Educational Foundation to provide 50 M.I.T. Science Teachers Fellowships each summer for five years. The current program, which will extend from June 29 to August 7, is the fifth in the series.

The special program for the fellowship winners has been designed by a Faculty committee at M.I.T. to provide a survey of recent developments in many of the sciences and to review, through special lectures in physics and chemistry, pertinent relationships between high school and college science courses. One of the high lights of the program will be a series of informal meetings for discussion of the problems and methods of teaching science.

The fellowship winners will also review recent scientific developments in such subjects as cosmic rays, nuclear physics, high-energy accelerators, radioactive tracers, large molecules, biological effects of radiation, artificial stimulation of rain, and problems of supersonic flight.

(Continued on page 520)

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# GEARS

## THE INSTITUTE GAZETTE

(Continued from page 518)

### Rumford Bicentennial

THE Institute celebrated the 200th anniversary of the birth of Count Rumford in Woburn, Mass., during a special summer program in thermodynamics from June 29 to July 10.

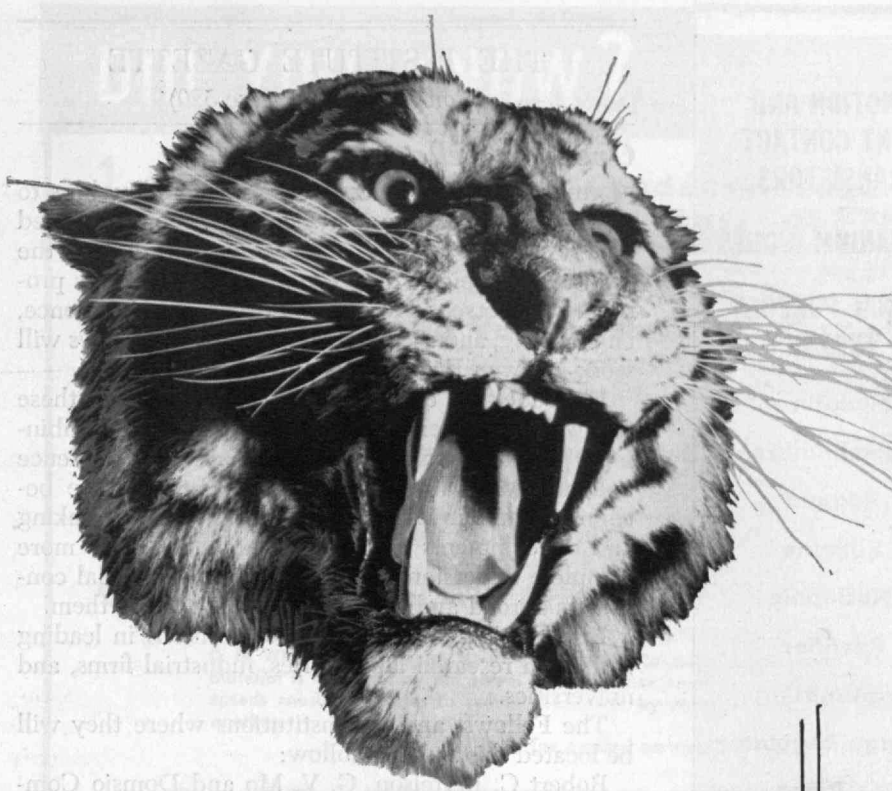
Count Rumford was born as Benjamin Thompson in Woburn in 1753. He performed experiments on the generation of heat during the firing of cannon, and his conclusions were among the first theories of what has now become the science of thermodynamics.

Four members of the M.I.T. Faculty gave the principal lectures in the program: Joseph H. Keenan, Professor of Mechanical Engineering; Melvin A. Herlin, Assistant Professor of Physics; James A. Beattie, Professor of Physical Chemistry; and Laszlo Tisza, Associate Professor of Physics.

Lars Onsager, Professor of Theoretical Chemistry at Yale University, was one of a number of special lecturers who participated in the summer program. Other members of the Institute's Faculty who also served as special lecturers are: Edwin R. Gilliland, Professor of Chemical Engineering; Walter H. Stockmayer, Professor of Physical Chemistry; Sanborn C. Brown, Associate Professor of Physics; Clark C. Stephenson, Associate Professor of Chemistry; and H. Guyford Stever, Associate Professor of Aeronautical Engineering.

(Continued on page 522)

*The Alumni Association of the Massachusetts Institute of Technology has the honor to announce for delivery in the autumn of 1953 a set of eight dinner-service plates bearing original designs by Samuel Chamberlain of the Class of 1918, and fashioned from hand-engraved copper plates by Josiah Wedgwood and Sons, Ltd., of Barlaston, Staffordshire, England, in Wedgwood Queen's Ware or Bone China. Your inquiry addressed to the Alumni Association, Room 1-280, M.I.T., Cambridge 39, Massachusetts, will bring complete details.*



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**THE INSTITUTE GAZETTE**

(Continued from page 520)

**Overseas Fellowships**

**T**HE award of 25 Overseas Summer Fellowships to graduate students at M.I.T. has been announced by Professor Norman J. Padelford, Chairman of the Institute's Foreign Study Committee. Under this program for overseas professional experience in science, engineering, and architecture, the M.I.T. Fellows will work in seven European countries this summer.

Dr. Padelford explained that the purpose of these fellowships is to enrich graduate training by combining a period of professional experience with residence and observation in a European country. While becoming familiar with specialized scientific thinking and developments in Europe, students gain a more complete understanding of economic and social conditions abroad and America's relationship to them.

Under this plan students take positions in leading European research laboratories, industrial firms, and universities.

The Fellows, and the institutions where they will be located this summer follow:

Robert C. Bertelson, G. V. Mo and Domsjo Company, Ornskoldsvik, Sweden.

Amar G. Bose, G., VI, Philips Electric Company, Eindhoven, Netherlands.

Moise H. Goldstein, Jr., '51, VI, ASEA Company, Servo-Technics Laboratory, Vasteras, Sweden.

(Continued on page 524)

# LIFETIME CAREER OPPORTUNITIES FOR TWO (2) EXCEPTIONAL MECHANICAL ENGINEERS

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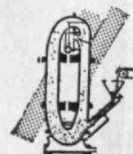
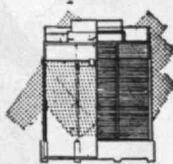
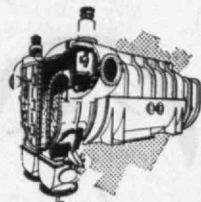
C. H. Wheeler Fluid Energy Reduction Mills reduce materials to sub-micron particle sizes. Material is conveyed by air, steam or any gas or vapor in a closed circuit at supersonic speeds causing particles to reduce themselves by repeated shattering contact with one another.

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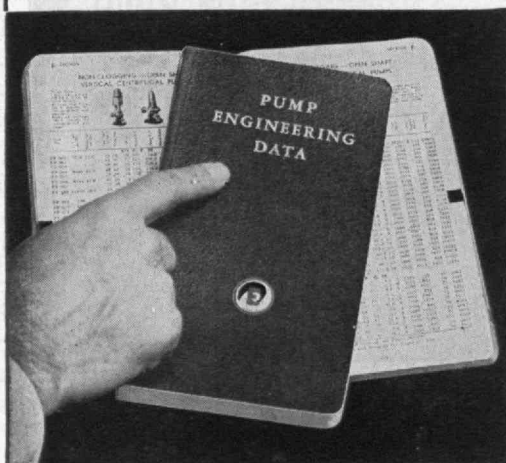


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## THE INSTITUTE GAZETTE

(Continued from page 522)

Ernest E. Huber, Jr., '51, VIII, Metallographic Institute, Stockholm, Sweden.

Charles W. Johnson, G., XVII, Danish National Institute of Building Research, Copenhagen, Denmark.

Howard K. Larson, G., II, De Laval Steam Turbine Company, Stockholm, Sweden.

Philip J. Luth, G., IV-A, Grenfell, Baines and Hargreaves, Lancashire, England.

Alan L. McWhorter, G., VI, Philips Electric Company, Eindhoven, Netherlands.

James K. Mitchell, G., I, Norwegian Geotechnical Institute, Oslo, Norway.

James G. Nelson, G., VI, ASEA Company, Rectifiers Laboratory, Ludvika, Sweden.

Arthur S. Obermayer, G., V, Chalmers Technical University, Gothenburg, Sweden.

John F. O'Donnell, G., X, French Petroleum Institute, Paris, France.

John L. Preston, G., VI, English Electric Company, Stafford, England.

Hugo S. Radt, Jr., G., XVI, Aeronautical Research Institute, Stockholm, Sweden.

George S. Reichenbach, G., II, John Thompson Ltd., Wolverhampton, England.

Lieutenant Virgil W. Rinehart, G., XIII-A, The Lindholmen Shipyard Company, Gothenburg, Sweden.

(Continued on page 526)



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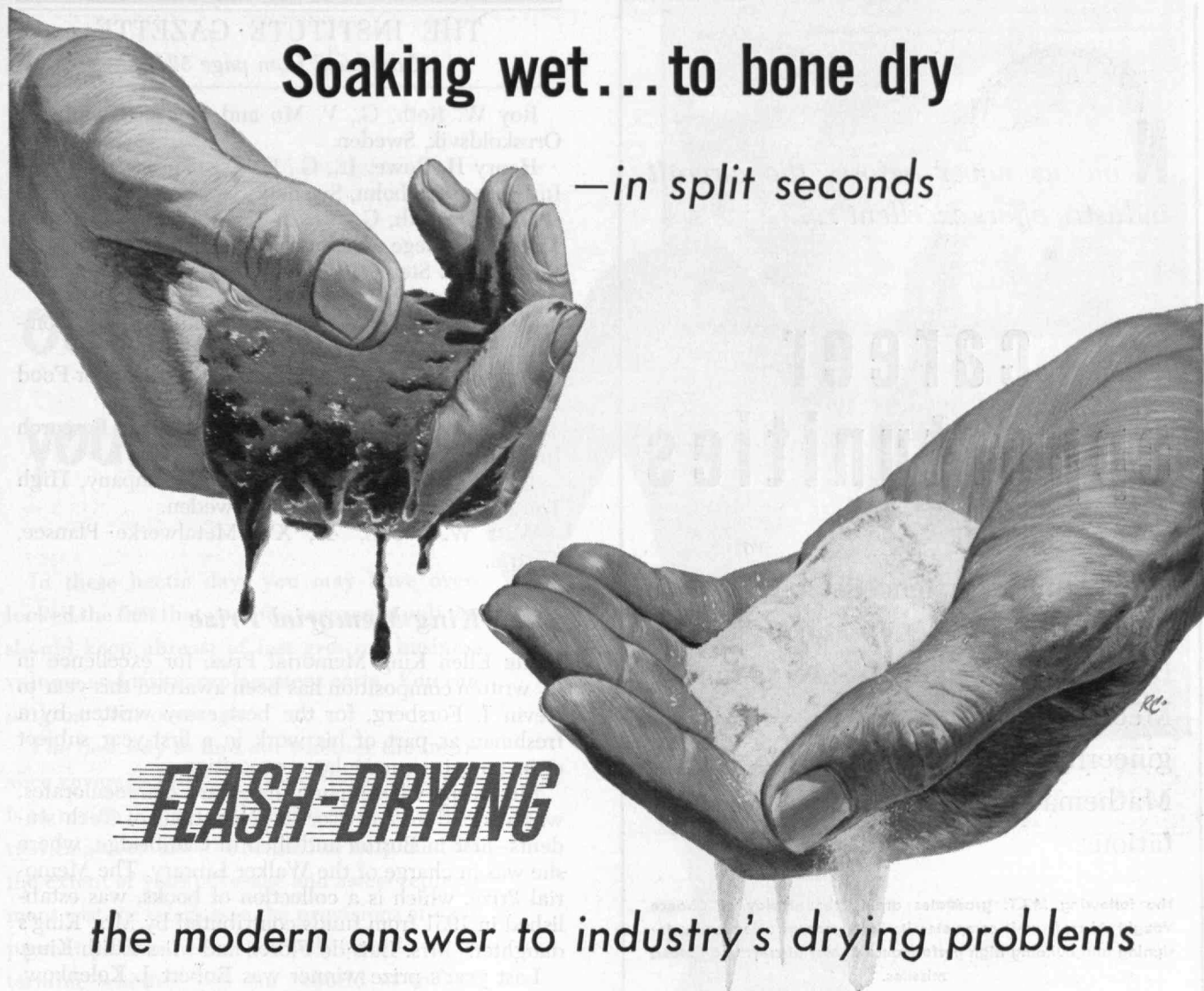
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J. R. Clark, Ass't. Chief Engineer .....	1929		
H. B. Gibbons .....	1929	D. E. Robison .....	1946
W. C. Schoofield .....	1932	L. B. Wadel .....	1946
H. A. Wood .....	1934	N. V. Mumford, Jr. ....	1947
J. B. Schliemann .....	1936	D. B. King .....	1948
G. H. Swan .....	1939	A. L. Lang, Jr. ....	1948
B. C. Scott, Jr. ....	1941	J. Jensen .....	1949
W. R. Foley .....	1942	A. B. Bower .....	1951
C. A. Lau .....	1942	W. G. Redmond, Jr. ....	1951
J. E. Stevens .....	1944	A. W. Shaw .....	1951
G. T. Upton .....	1945	W. G. Stanfield .....	1951
A. F. Litchfield .....	1946	J. J. Welch, Jr. ....	1951

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Roy W. Roth, G., V, Mo and Domsjo Company, Ornskoldsvik, Sweden.

Henry H. Rowe, Jr., G., II, Aeronautical Research Institute, Stockholm, Sweden.

John I. Smith, G., VI, English Electric Company, Marconi College, Chelmsford, England.

Stuart W. Stein, G., IV-B, Riley and Neusum, Lincoln, England.

Steven M. Sussman, G., VI-A, Philips Electric Company, Eindhoven, Netherlands.

David S. Swanson, G., X, Swedish Institute for Food Preservation Research, Gothenburg, Sweden.

Arthur S. Tingas, '53, II, Swedish Textile Research Institute, Gothenburg, Sweden.

James K. Watson, G., VI, ASEA Company, High Tension Laboratory, Ludvika, Sweden.

Watt W. Webb, '47, XV, Metalwerke Plansee, Austria.

## Ellen King Memorial Prize

**T**HE Ellen King Memorial Prize for excellence in written composition has been awarded this year to Kevin J. Forsberg, for the best essay written by a freshman as part of his work in a first-year subject or as an extra-curricular composition.

Mrs. King, whose name the award commemorates, was a friend and advisor to generations of Tech students—first in Boston and then in Cambridge, where she was in charge of the Walker Library. The Memorial Prize, which is a collection of books, was established in 1951 from funds contributed by Mrs. King's daughters, Mrs. Luis de Florez and Miss Edith King.

Last year's prize winner was Robert J. Kolenkow, a sophomore in Course VIII.

## Record Employment Opportunities

**M**EMBERS of the Class of 1953, graduated from the Institute on June 12, left M.I.T. with professional opportunities in science and engineering unequalled by any class in the history of M.I.T. Except for 250 graduates who will join the armed services as officers for two years, the graduating class scattered to all parts of the world.

(Continued on page 528)

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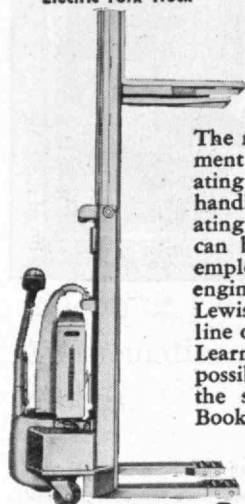
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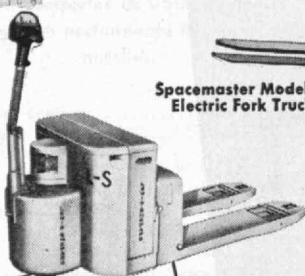
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## THE INSTITUTE GAZETTE

(Continued from page 526)

### Fulbright Awards

THE Fulbright Committee at the Institute has received from the United States Department of State notice of the award of scholarships for foreign study to the following 15 M.I.T. students and graduate students:

John H. Austin, G., Delft Institute of Technology, Netherlands.

William G. Blanding, '53, Institute of Technology, Norway.

William F. Brace, G., University of Innsbruck, Austria.

Edward S. Cohen, G., Delft Institute of Technology, Netherlands.

Richard C. Donkervoet, G., Delft Institute of Technology, Netherlands.

Lawrence Gould, G., University of Paris, France.

David A. Grossman, G., Higher Institute of Architecture, Venice, Italy.

Sidney W. Hess, '53, Delft Institute of Technology, Netherlands.

Morton S. Hoppenfeld, '52, University College, the University of London, England.

Lloyd G. Hyman, '53, University of Birmingham, England.

(Concluded on page 530)

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R. GILLOOLY	MS (AE) 1946	SENIOR DESIGN ENGINEER
S. K. LANDGRAF	BS (AE) 1947	DESIGN ENGINEER
J. C. McALLISTER	BS (EE) 1950	DESIGN ENGINEER
R. CASSIDY	BS (CE) 1952	TEST ENGINEER

## HELICOPTER ENGINEERING:

R. B. WOODWARD	BS (AE) 1949	DESIGN ENGINEER
C. H. HURKAMP	BS 1927	CHIEF, HELICOPTER DIVISION
J. J. MAZZONI	BS (CE) 1931	SENIOR DESIGN ENGINEER

## MISSILES ENGINEERING:

B. G. BROMBERG	ScD 1947	CHIEF, MISSILE DIVISION
A. L. LOWELL	BS (AE) 1941	CHIEF, AERODYNAMICS
A. R. KRENKEL	MS (AE) 1949	SENIOR DESIGN ENGINEER
J. W. TWOMBLY, JR.	BS (EE) 1950	DESIGN ENGINEER
W. I. HARRIS	BS (EE) 1950	DEVELOPMENT ENGINEER
J. F. MELLO	BS (AE) 1952	AERODYNAMICIST
I. R. MITCHELL	BS (GE) 1930	SPECIFICATION ANALYST
G. P. KERNS	BS (EE) 1953	DEVELOPMENT ENGINEER

## EXECUTIVE STAFF:

J. S. McDONNELL	MS (AE) 1925	PRESIDENT
J. F. ALDRIDGE	MS (AE) 1939	VICE-PRESIDENT
W. F. BURKE	BS (AE) 1925	ASST. FACTORY MGR.
A. P. WILKS		PLANT ENGINEER

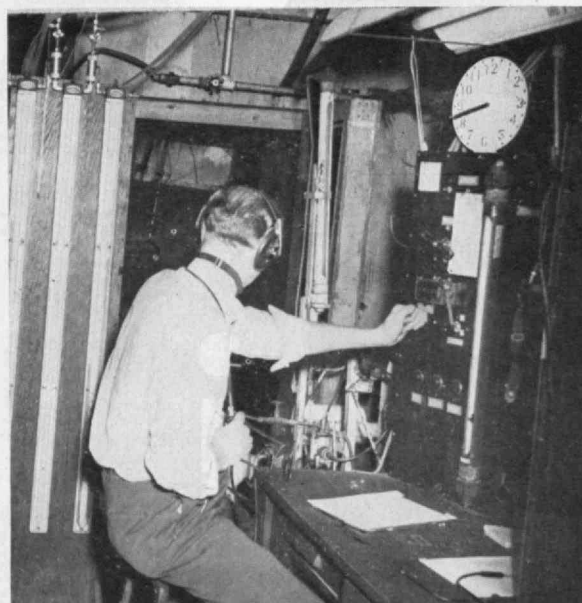
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## THE INSTITUTE GAZETTE

(Concluded from page 528)

John R. Schrieffer, '53, University of Manchester, England.

Lloyd H. Siegal, G., Polytechnic Institute of Milan, Italy.

Richard R. Soderlind, G., Royal Academy of Fine Arts, Denmark.

Bernard P. Spring, G., Helsinki Institute of Technology, Finland.

Karl Zane Yost, '53, University of Florence, Italy.

These Fulbright Scholarships will be effective during the academic year 1953-1954.

The award is made by the Department of State under the provision of Public Law 584 (79th Congress), the Fulbright Act. It is one of approximately 900 grants for study abroad in the academic year 1953-1954 under the United States Educational Exchange Program. As provided by the Act, all students are selected by the board of Foreign Scholarships, the members of which are appointed by the President. Students are recommended by the campus Fulbright committees and by the Institute of International Education.

Funds used under the Fulbright Act are foreign currencies obtained through surplus property sales abroad. Under executive agreements with the foreign governments, exchange programs are being carried out for the academic year 1953-1954 with the following 25 countries: Australia, Austria, Belgium, Burma, Denmark, Egypt, Finland, France, Germany, Greece, India, Iran, Iraq, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Pakistan, Philippines, Thailand, Turkey, the Union of South Africa, and the United Kingdom. A program is planned next year for Sweden and Ceylon.

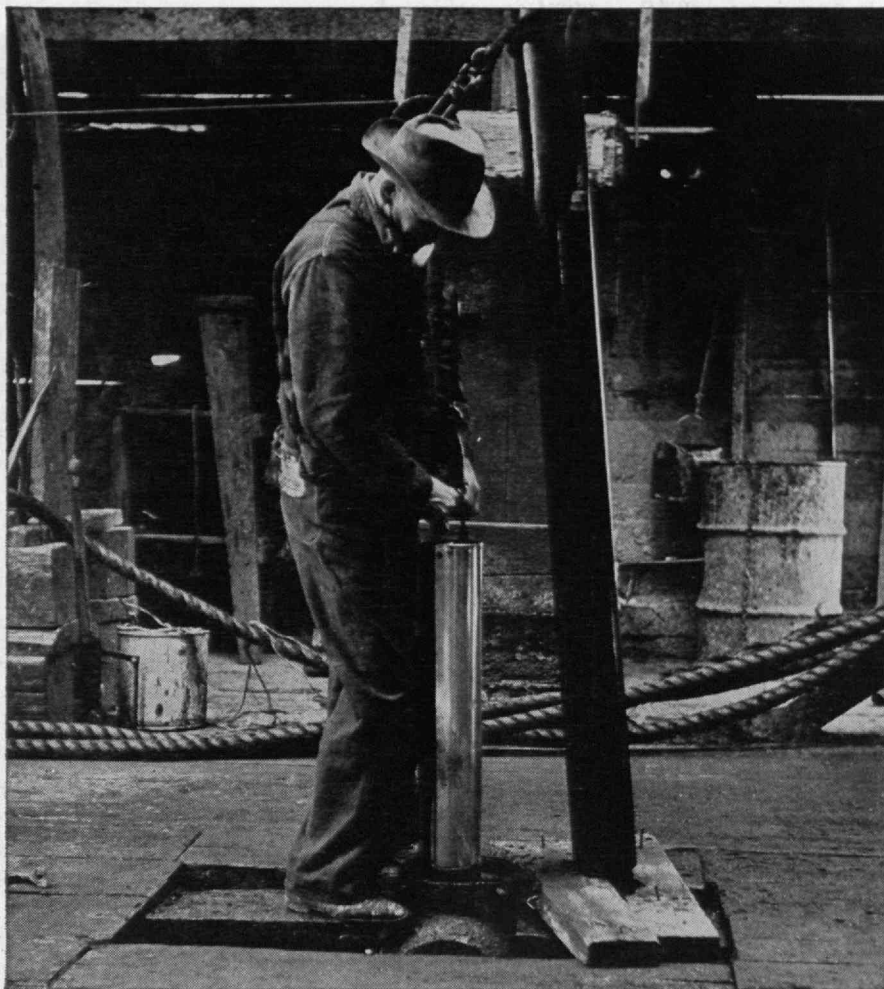
The United States Educational Exchange Program is designed to promote a better understanding of the United States in other countries, and to increase mutual understanding between the people of the United States and the people of other countries. The Program also provides opportunities for foreign nationals to study in American colleges and universities, and for an exchange of teachers, lecturers, and specialists between the United States and more than 70 foreign countries.

### Modern Highway Conference

Nearly 200 highway and public works engineers and planners from 16 states and the District of Columbia registered at the Institute on June 23 for a three-day conference on the planning, surveying and designing of modern highways.

John B. Wilbur, Head of the Department of Civil and Sanitary Engineering at M.I.T., and John A. Volpe, Commissioner, Massachusetts Department of Public Works, welcomed the registrants to the conference which was sponsored by the Departments of Civil and Sanitary Engineering and of City and Regional Planning at M.I.T. and by the Massachusetts Department of Public Works.

# At the Other End—TNT



## For a Touchy Job, Plymouth *Quality* Rope!

Lowering a charge of nitroglycerine deep into the ground to "shoot" an oilwell is a touchy job—one that calls for the dependability of Plymouth *quality* rope.

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a string of barges . . .  
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explosives . . . a  
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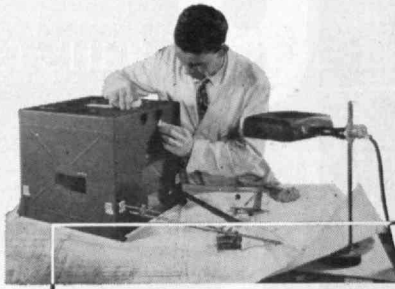
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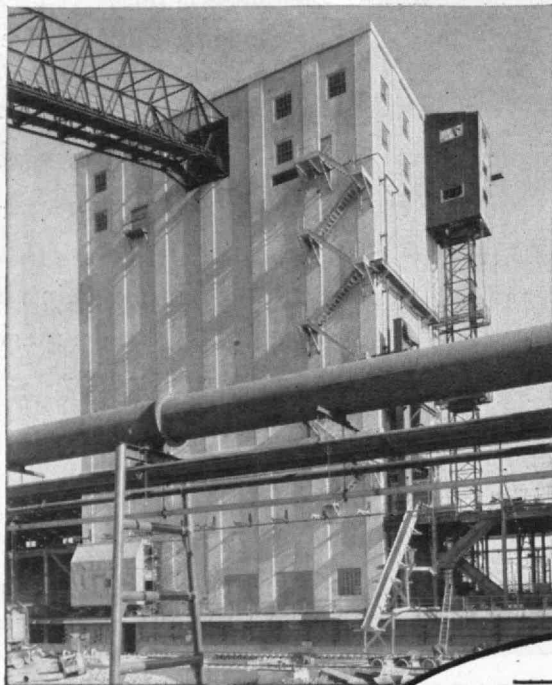
(Concluded from page 488)

will or whim, providing that the ends they have in mind are achieved.

If there be no such Absolute back of life, they can justify themselves in using any means at their disposal to attain their own ends, to secure control of people and power for their own purpose; and those who are able, are justified in taking control of the supreme powers of life and death, as well as of the control and the manipulation of the affairs of human lives for paltry ends. It is such control that the democratic-destroying forces would always seize. But the people of a democracy always fight against letting the state seize any such control. For there constantly arises the religious insight that behind life stands God, and all life is finally answerable to Him and to Him alone. Therefore, in the end, to Him should go our supreme allegiance and our loyalty. Until men see and acknowledge this, democracy will always be in deadly peril.

Thus it is not enough that we reject the way of our enemies, we must answer them positively here and on the world scene. And that positive answer should be to affirm in deed and in philosophy our Great Idea, the conviction about man and his infinite worth, about life's purpose and about man's God-given rights, beliefs upon which our democracy must always rest. And these convictions can bring us and our fellows into the most creative revolutionary period our humankind has ever known.

Democracy, by itself, is not enough.



BIN BUILDING  
SINCE 1914

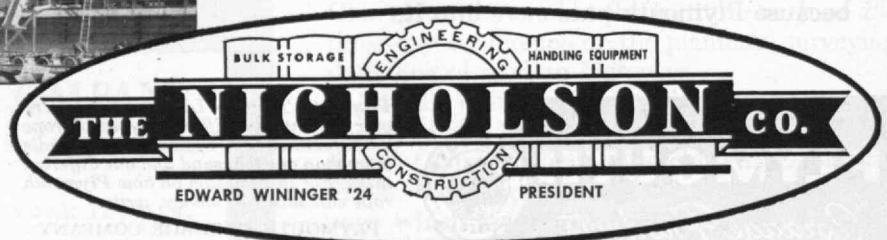
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## INDUSTRIAL PRODUCTION

Nicholson bins are working in some part of the process or facilities of most of the leading industries in the country, storing materials in bulk or as blending and batch plants.

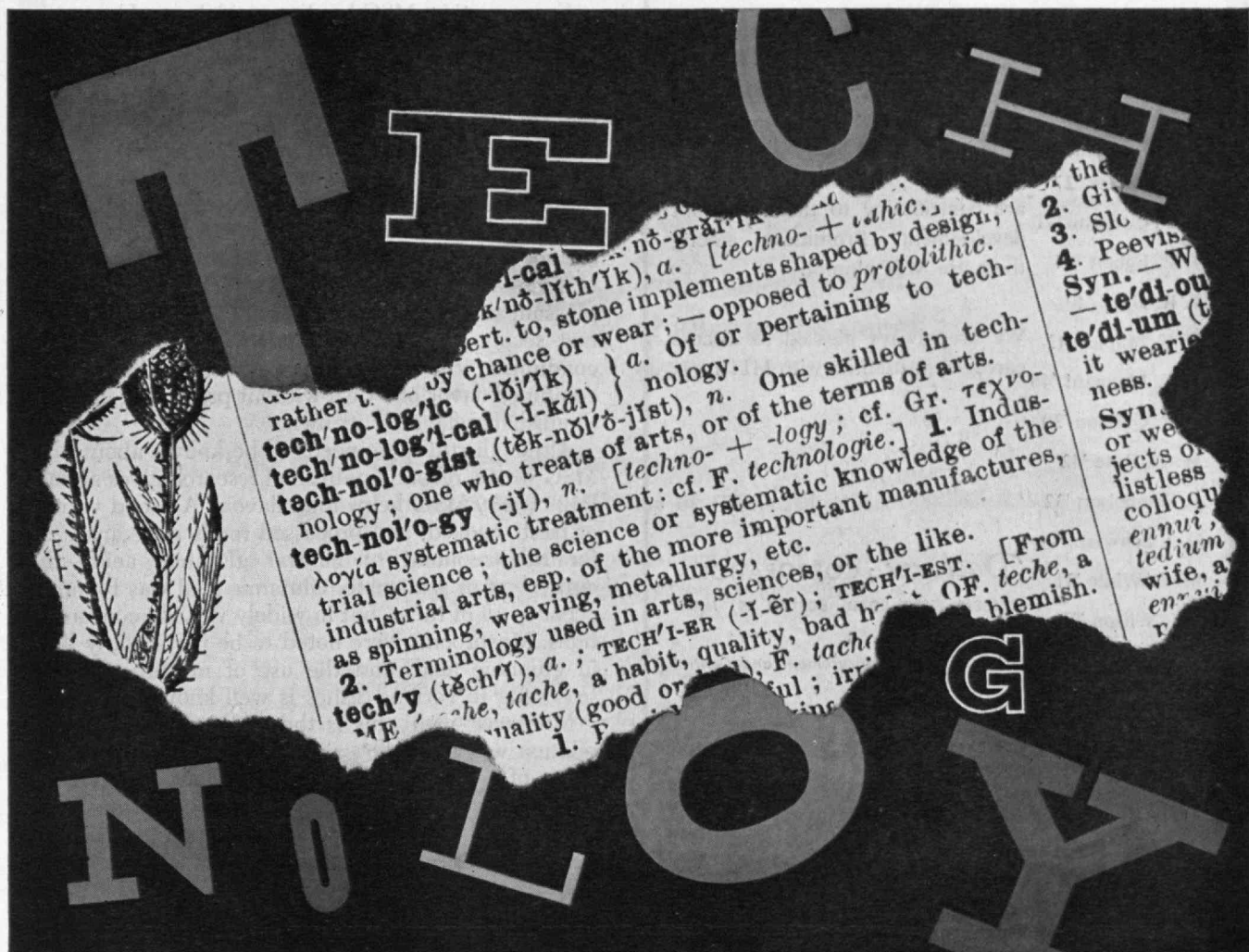
The bin structure shown holds several thousand tons of bituminous coal serving "Wilputte Coke Ovens" for the new Fairless Works of U. S. Steel Corporation at Morrisville, Pennsylvania.



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## TREND OF AFFAIRS

(Concluded from page 484)

For some time MSG has been widely used to season commercially packed foods, such as soups, sauces, stews, and vegetable juices. MSG is generally conceded to improve the flavor of such comestibles, but the question is, how? Some pronouncements on this subject have been couched in the florid prose of gastronomy, and have bordered on metaphysics. Thus MSG is stated to "blend and round out" food flavors—whatever that means. MSG is also said to suppress certain undesirable flavors, such as overcooked tastes in foods held overlong in steam tables, or an unpleasant sharpness in onion. But at least one objective fact seems clear; MSG is truly a seasoning, not a condiment. That is to say, it enhances the over-all combined flavor of a dish without presenting any distinguishable flavor of its own.

Although still more needs to be known about *how* MSG works, recently published research gives an inkling of *why* MSG helps food flavors. A broad variety of fresh, cooked, and processed foods were analyzed for their content of natural glutamic acid—the equivalent of glutamate. Glutamic acid was found to occur in all of them, but in widely varying concentrations. Mushrooms were noted to be particularly high in glutamic acid; and the use of mushrooms as a seasoning in various dishes is well known.

Moreover—and this is the striking point—a correlation was found to exist between the goodness of flavor of a given food and its glutamic acid concentration. For example, young fresh flavorsome vegetables had a higher glutamic acid content than did the same vegetables after storage in a refrigerator, when they had also lost some of their flavor. Thus it becomes reasonable to postulate that MSG represents, or simulates, a flavor principle naturally present in foods. Adding MSG to prepared foods may serve to replace something that has been degraded by storage, cooking, or processing.

After extended use by commercial food processors, MSG is now appearing in grocery stores, where it is offered to the housewife under several trade names. This continuing and broadening use of MSG in the American dietary may be expected to maintain interest in studies of its mechanism of action, so that in time its aura of mystery should fade away.

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## OUR UNIVERSITIES —

### A BASTION FOR AMERICA

*(Concluded from page 490)*

I do not suggest that present-day concepts and practices of the university cannot be improved. They can, and I believe that the challenge of the present crises is leading to improvement. There are opportunities for the governing bodies of our educational institutions to develop better teamwork by strengthening the concept of a society of scholars — students, faculty, administrators, trustees — working together for a common ideal. Faculties can improve their procedures for ridding themselves of their unfit and for attracting to themselves the superbly fit. Trustees can encourage faculties to accept and discharge their proper responsibility for maintaining standards and self-discipline; and for speaking up, when necessary, in institutional defense as well as in self-defense. All parts of the institution need to share the responsibility for maintaining the good name of the institution and for underwriting that good name.

At M.I.T. we have gone a long way in attaining these goals, as shown by the response of our academic community to the investigations of several months ago. Since it is the prerogative of the college president to extoll the virtues of his own institution, let me say with pride that the unity, teamwork, and unflinching public responsibility demonstrated by M.I.T. Corporation and Faculty this past year have helped to

strengthen the university concept in America. And this institute of technology has given a demonstration of the liberal arts and humanities in action which is more effective than any course of instruction could ever be. Let no one say that science and technology do not embrace the ancient liberal virtues of courage, candor, loyalty, justice, and a deep sympathy for the dignity and sacredness of the individual. To witness and to share in this academic team play has been for me a liberal education and a deeply felt experience, as I am sure it has for many others.

All these things need to be said and understood if we are going to stress how much we have reason for pride and confidence in our institutions. By the same token that we build up America by building up Americans, we must enrich our creative intellectual life, not by abusing but by building up our scholars. If our universities flourish as the seedbeds of the nation's ideas and ideals, the future of the nation is more certain. If our universities become weak and servile, then our society will have lost its marrow and its spirit and itself becomes servile.

There can be no more apt or happy illustration of the meaning and the glory of education in America than what we have witnessed here today in this graduated class from the four corners of the globe. There can be no greater assurance of the power and promise of education than the young men and women we salute today and proudly send on their way. There can be no better demonstration of building up educated men to build up the world.



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## ALUMNI DAY

(Continued from page 506)

associated with the Institute. Dr. Bush's address was devoted primarily to recent changes in the field of electrical engineering. He pointed out that the engineer has a dual role; he must deal with the applications of science and must be particularly alert to the demands of economics. But the engineer must also be competent to deal with human relations. Since World War II there has been a burst of activity in science, research, and manufacturing which provides a very great stimulus in all fields of electrical engineering but which is particularly strong in the branches of communications, electronics, servomechanisms, and information processes. Much of the recent activity in these fields has been stimulated by government procurement for defense, and a cutback in this activity may be anticipated; but the recent changes in electrical engineering have expanded the field horizontally and have resulted in a great diversification of effort.

Professor Brown presented a résumé of progress that had taken place in the Department, particularly within the last year. Two effects dominate the present administration of the Department: (1) Electrical engineering is much more scientific than it was a decade ago and the time interval between conception of new ideas and its application has been drastically reduced; (2) In setting up new courses for the Department of Electrical Engineering, the full benefits of the M.I.T. environment have been effectively utilized with the result that "a good deal of water has been wrung out of the curriculum, especially that of the cook book type"; (3) Professor Ernst A. Guillemin, '24, has recently revised the sophomore program to place greater emphasis on scientific fundamentals, and the previous practice of offering professional options has been eliminated. In making the revision, attempts have been made to find basic motivation which provides opportunity for the nonconformist. Accordingly the curriculum at present aims to train students to fulfill man's desire to process intelligence and his desire to develop the exploitation of energy for the sake of having available a greater amount of energy. The new course calls attention to the fact that materials are useful primarily to create electromag-

(Continued on page 540)

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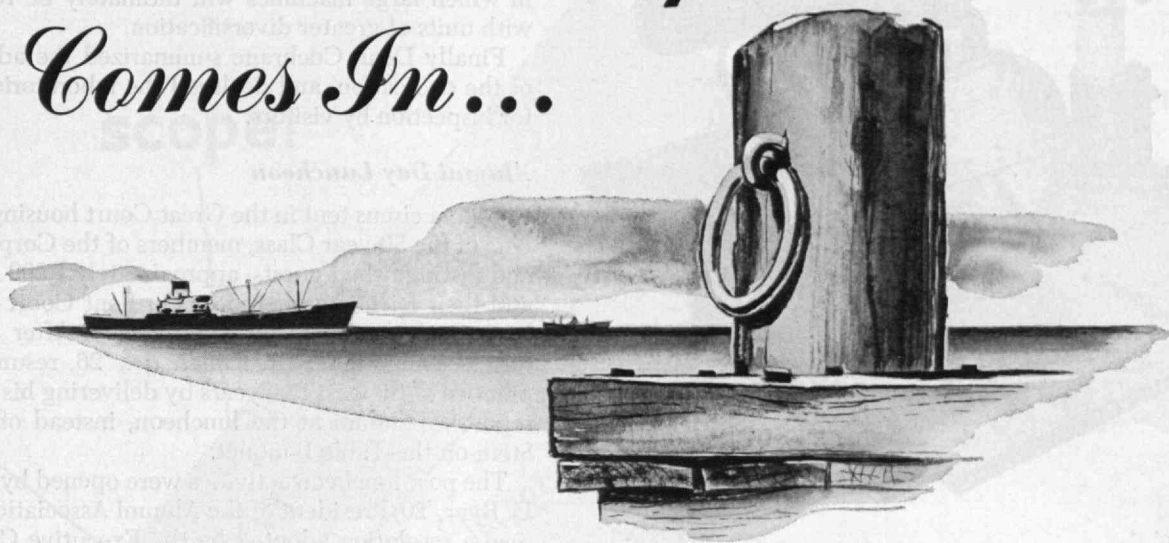
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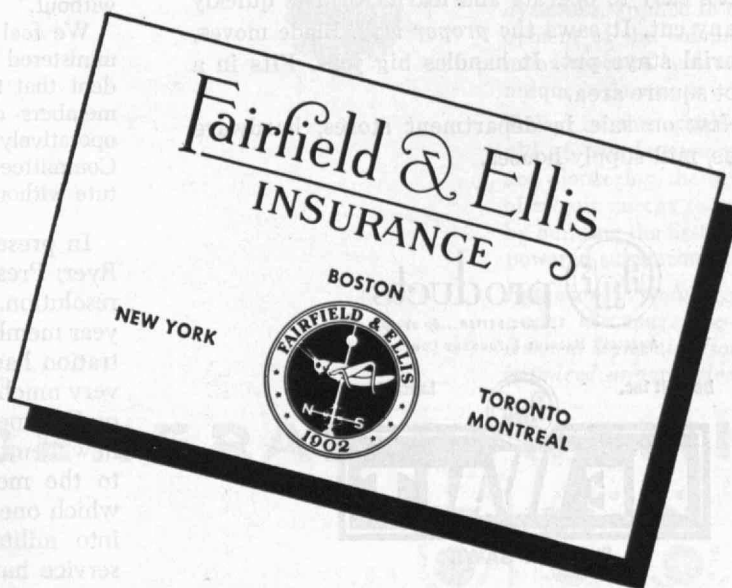
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(Continued from page 538)



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netic fields. There is a need to awaken in all engineering students the same opportunities for individual incentive which electronics is able to supply. A major change is being made in the Machinery Laboratory in which large machines will ultimately be replaced with units of greater diversification.

Finally Dean Cochrane summarized the addresses of the dedication, and declared the laboratories open for inspection by visitors.

### Alumni Day Luncheon

With a circus tent in the Great Court housing members of the 50-year Class, members of the Corporation and distinguished guests, approximately 1,200 Alumni and their friends gathered in Du Pont Court for the buffet-style luncheon on Alumni Day. After this informal event, James R. Killian, Jr., '26, resumed his practice of the past two years by delivering his annual report to Alumni at the luncheon, instead of at the Stein-on-the-Table Banquet.

The post-luncheon activities were opened by Edwin D. Ryer, '20, President of the Alumni Association, who read a resolution adopted by the Executive Committee of the Alumni Association in support of the stand taken by the Administration in dealing with the investigations of M.I.T. Faculty members by the House Un-American Activities Committee. The statement read by Mr. Ryer is as follows:

The Executive Committee of the Alumni Association has directed me to express to you on this occasion our whole-hearted support of the position taken by the Institute's Administration and Faculty with respect to the recent Congressional investigations.

We know that the Massachusetts Institute of Technology stands unequivocally opposed to Communism.

We subscribe to your stand that a member of our Faculty "must be diligent and loyal in citizenship and that he must teach in the clear light without hidden allegiance or obligations which require him to distort his research or teaching in accord with dictates from without."

We feel it equally important that this policy be administered fairly and unemotionally; and we are confident that this has been done in the cases of the three members of our Faculty who testified freely and co-operatively before the House Un-American Activities Committee, and who have been continued at the Institute without impairment of their official status.

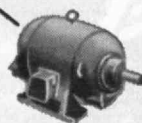
In presenting his report to Alumni, following Mr. Ryer, President Killian expressed his thanks for the resolution. He also pointed out that during the last year members of the Institute's Faculty and Administration had to stand a good deal, but they stood for very much and they stood together. He reported that on Commencement Day, June 12, approximately 1,000 new members of the Class of 1953 have been admitted to the membership of the Alumni Association, of which one third to one half will shortly be inducted into military service. Those not entering military service have been offered more employment opportunities than ever before in the history of the Institute.

(Continued on page 542)



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**GENERAL DYNAMICS**



(Continued from page 540)

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President Killian took obvious pleasure in relating the many ways in which the student body engaged in cultural and educational activities outside of the classroom. Many have taken a more or less serious interest in painting, religion, music, or the manual hobbies — all of which contribute to individual development. To a greater extent than ever before, freshmen and Faculty have come together in informal discussion groups — one of the most successful of which discussed problems of modern physics at the homes of Faculty members. Individual development has also been fostered by the fact that classes at the Institute are relatively small. The lecture sessions in freshman classes, for example, do not exceed 25 or 30 students. During the past year 40 Faculty members have each elected to serve as advisers to 25 freshmen. In thus devoting effort to the counseling of new students, the primary aim of the Faculty and Administration has been to develop concern for the intellectual digestive process rather than for the quantity of material fed to the students.

Five members of the Institute staff have received Guggenheim Awards for the next year, and 17 students have received Fulbright scholarships. In addition, 63 persons who have received National Science Foundation Fellowships have elected to take their fellowship studies at M.I.T.

The student aid program, under the direction of Thomas P. Pitré, Associate Dean of Students, and with the assistance of William H. Carlisle, Jr., '28, Manager of Student Personnel, has enabled more than 1,200 students to engage in part-time work during the past year. During the year the amount of graduate scholarships was increased by about 40 per cent, and the number of students to whom scholarships were awarded was increased by about 15 per cent. In its scholarship activities, the Institute has enjoyed unusual success in the 12-month program of the Sloan Scholarships. The Technology Loan fund, established by Gerard Swope, '95, about 1930, has loaned more than \$2,250,000 to more than 3,600 students during its existence. During the past year \$215,000 has been loaned at an interest rate of 1 per cent. Income from interest has been more than adequate to compensate for the small loss through deaths and bad debts, so that the fund continues to grow slowly. The principal

(Continued on page 544)

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(Continued from page 542)

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Edwin M. McNally, '18  
Leon P. Breziński, '29

Use Barbasol also for soothing relief of sunburn, windburn, and insect bites.

and income from this fund are perpetually available and are freely used by those students who are anxious to invest in their own future.

Under the heading of new construction, President Killian announced that the John Thompson Dorrance Laboratory would be dedicated on June 23, and that construction is already under way for the Kresge Auditorium, as described on page 514 of this issue. The Division of Biochemistry, as already reported in the December, 1952, issue of *The Review*, will begin operations on July 1. Noteworthy medical research is likewise going on at the Institute, particularly in the application of x-rays to cancer. Recent experience shows that three out of every five persons treated at the Institute are now free from any symptoms of cancer, even though many came to the campus with advanced stages of this disease.

President Killian announced that, in the School of Industrial Management, the number of Sloan Fellowships for the coming year will be doubled. He also pointed out that student health at the Institute is among the finest of any of the United States colleges, partly because considerable emphasis is placed on the use of techniques of medicine as a preventive means. In conclusion, President Killian outlined the present aims of the Institute in the following seven-point program: (1) There is a need to make student residence

(Continued on page 546)

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All Types

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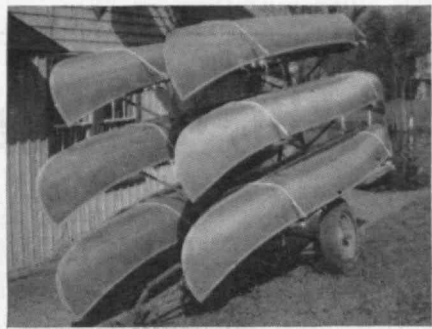
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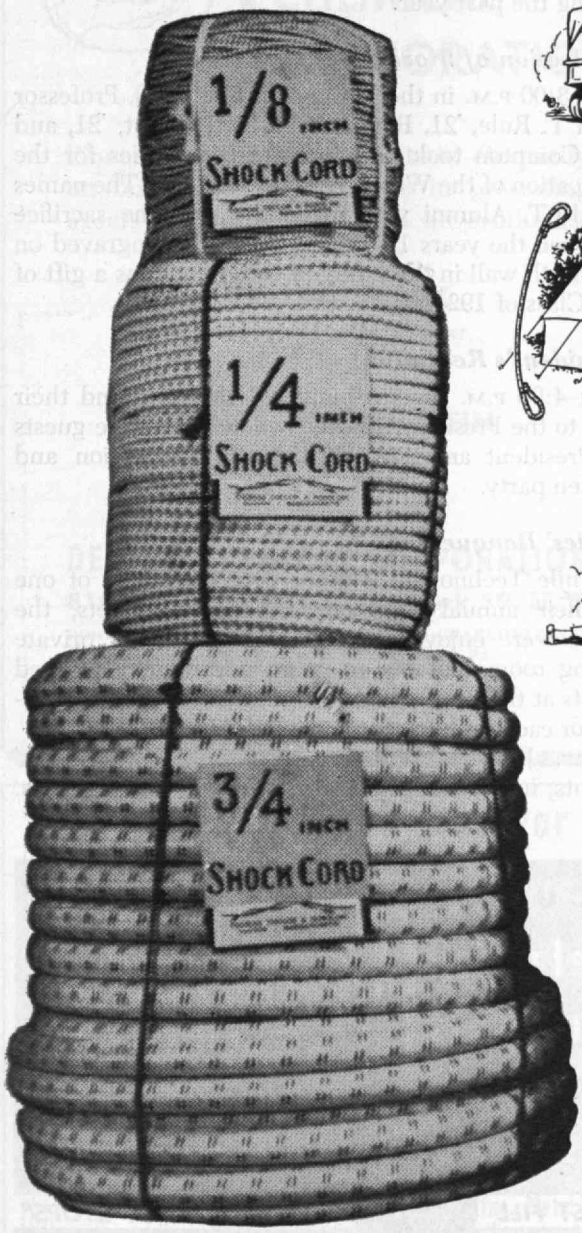
Elastic Shock Cord is used extensively for tie-downs on trailers, for boats and canoes, loads of many types. It is a time-saver, as it eliminates frequent stops for re-adjustment en route. The problem of loads shifting is reduced or eliminated. The cord does not mar the surface. Elastic Shock Cord is also ideal for transporting racing boats on cars.



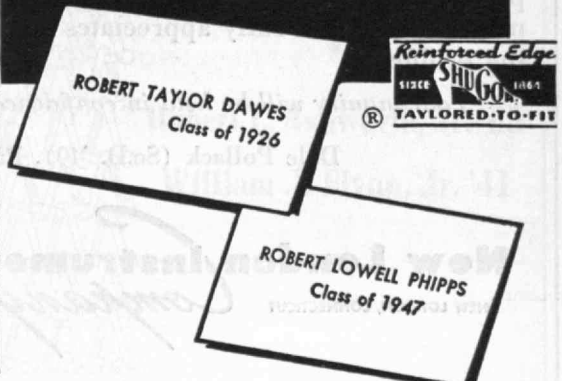
Elastic Shock Cord is ideal for tent guy ropes. It takes up the slack and holds firm in high winds or gusty weather. It minimizes torn fastenings and loosening of stakes. A loop of elastic shock cord, preferably at the end of each guy rope, will absorb the shocks, and save time in setting up or taking down tents. No adjustment is necessary, merely place the stakes so the elastic cord will be under some tension when slipped over the stake.



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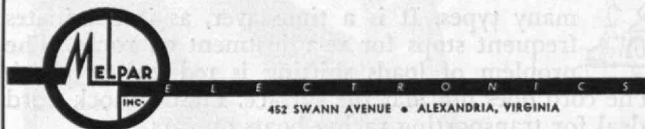


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## ALUMNI DAY

(Continued from page 544)

more stimulating and invigorating. (2) Every effort should be made to encourage participation in student government so that students may learn to assume greater responsibility for the management of their own activities. (3) Experiments in several fields are under way to increase student enthusiasm for learning and study. (4) The Institute recognizes, and is anxious to increase, those incentives which will assure greater effectiveness of teaching. (5) With the postwar enrollment stabilized at about 5,000 students there appears to be excellent prospect for selecting incoming students on the basis of their ability to benefit most from the type of learning the Institute has to offer. (6) In order to round out its physical facilities, the Institute is looking toward the acquisition of an adequate gymnasium and lecture hall. (7) Among its long-term fiscal objectives, the Institute is looking toward an increase of \$20,000,000 over the next five years — of which \$3,000,000 has already been received during the past year.

### Dedication of World War II Memorial

At 3:00 P.M. in the lobby of Building 10, Professor John T. Rule, '21, Raymond A. St. Laurent, '21, and Dr. Compton took part in brief ceremonies for the dedication of the World War II Memorial. The names of M.I.T. Alumni who made the supreme sacrifice between the years 1941-1945 have been engraved on the north wall in the lobby of Building 10 as a gift of the Class of 1921, as illustrated on page 480.

### President's Reception

At 4:00 P.M. several hundred Alumni found their way to the President's House where they were guests of President and Mrs. Killian at a reception and garden party.

### Ladies' Banquet

While Technology Alumni were partaking of one of their annual Stein-on-the-Table Banquets, the wives were enjoying their own banquet in private dining rooms not far away. In addition to honored guests at the head table, 12 round tables (with a hostess for each table) accommodated the ladies.

Mrs. John B. Wilbur, chairman of the Ladies' Events, introduced those at the head table, and Mrs.

(Continued on page 548)

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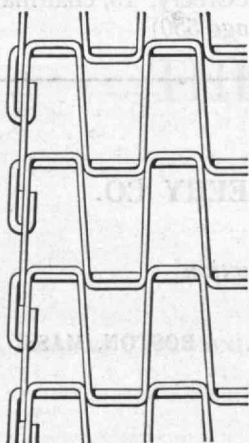
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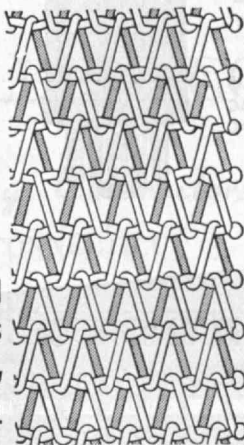
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**Robert C. Ashworth, Jr. '25**

**William J. Flynn, Jr. '41**

## ALUMNI DAY

(Continued from page 546)

James R. Killian, Jr., in her informal and friendly fashion introduced Miss Julia M. Comstock, Mrs. Nathaniel McL. Sage, '13, Mrs. Stanley McCormick, '04, Miss Emilie Drew, '56, Mrs. Thomas B. Drew, Mrs. James Donovan, and Mrs. Ralph T. Joje.

Mrs. Elspeth D. Rostow, Assistant Professor of History at M.I.T., spoke on the subject, "Sophomores, Slide Rules, and Sophocles" — a topic described by those who heard the address as "like a mysterious delectable-looking *hors d'oeuvre*." Professor Rostow's talk gave her impressions of Technology from the point of view of the first woman professor the Institute has ever had. Professor Rostow identified the students with the sophomores of her address, the Faculty with slide rules, and the current humanities program at M.I.T. with her subject of Sophocles. Space is not available for a full report of this address but the concluding paragraph hints at the tone of this unusual address:

There you have my eclectic impressions of M.I.T. A serious and argumentative student body; a talented and responsible Faculty; and the beginning of significant new trends in engineering education. When you add to this the factors that I haven't discussed . . . an able and distinguished alumni body, a highly competent administration, and a Corporation of discernment . . . you'll understand why I think the place is in pretty good shape. So if anyone should ask you the reason your husband went to M.I.T., just shrug your shoulders with womanly wisdom and reply, "Where *else* would a good man go?"

### Stein-on-the-Table Banquet

Promptly at seven o'clock, while the ladies gathered for their own banquet in Parlors B and C of the Hotel Statler, Technology Alumni congregated in the ballroom of the Hotel Statler for their annual Stein-on-the-Table Banquet. Under the leadership of Orville B. Denison, '11, and to the accompaniment of Harry U. Camp, '18, Tech songs rang out loud and clear throughout the evening. To add to the festivity, at each dinner guest's place was a Technology stein designed by Henry B. Kane, '24.

Following the banquet, at which Edwin D. Ryer, '20, President of the Alumni Association, presided, guests at the head table were introduced as well as Alumni from distant places of the world. Mr. Ryer then called upon George W. McCreery, '19, chairman

(Concluded on page 550)

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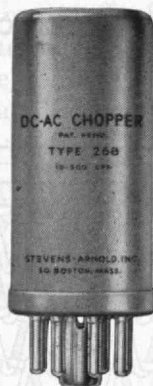
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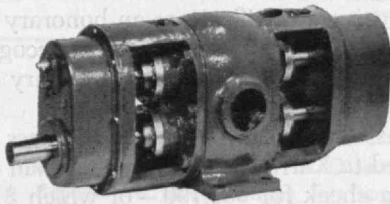
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## **ALUMNI DAY**

(Concluded from page 548)

of Alumni Day, to conduct Wallace M. Ross to the platform to receive a certificate as an honorary member of the M.I.T. Alumni Association, in recognition of his 34 years of service as General Secretary of the Technology Christian Association.

For the Class of 1928, Ralph T. Joep, Class President, presented to Karl T. Compton, chairman of the Corporation, a check for \$85,790 — of which \$10,000 is to be used for research, and \$75,790 for the establishment of the Class of 1928 Endowment Fund, the first Class Endowment Fund with income only to be used for general purposes. In making this announcement, Mr. Joep also took obvious pride in announcing that total contributions from his Class, since their graduation one quarter century ago, amounted to \$191,043. For the 50-year Class, Frederic A. Eustis, '03, Secretary, presented the class gift of \$25,950, and announced that their total gifts since 1903 amounted to \$75,383. On behalf of the Corporation Dr. Compton graciously accepted both gifts.

President Ryer then called on Dr. Killian who made a short address in introducing Erwin D. Canham, editor of the *Christian Science Monitor*. Mr. Canham's banquet address, "The Chances for Peace," appears on page 495, of this issue of *The Review*.

As final event of the evening, Mr. Ryer introduced Horatio L. Bond, '23, who will serve as president of the Alumni Association for the year beginning July 1, 1953. After a few words of appreciation from Mr. Bond, for his election to this high office, and the singing of one or two songs, the meeting was adjourned at 9:30 P.M.

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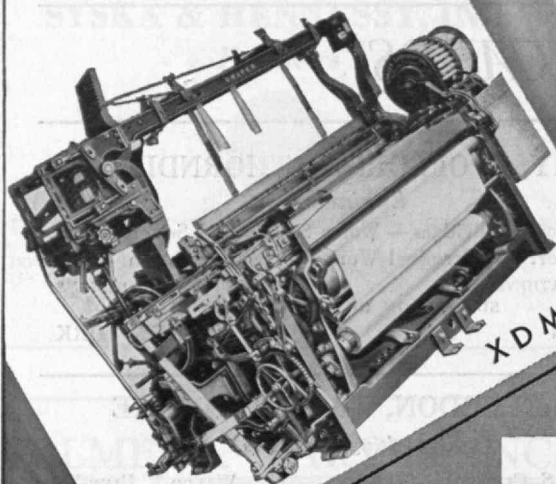
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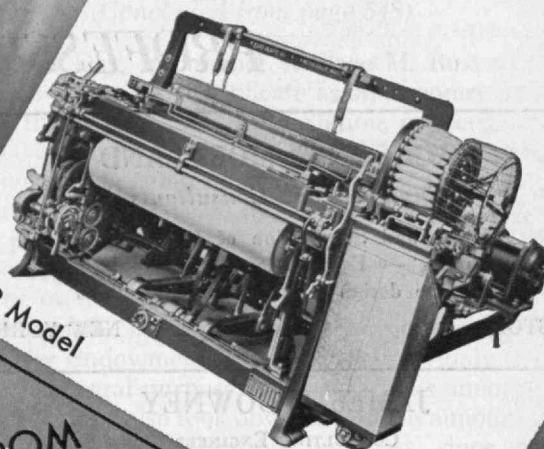
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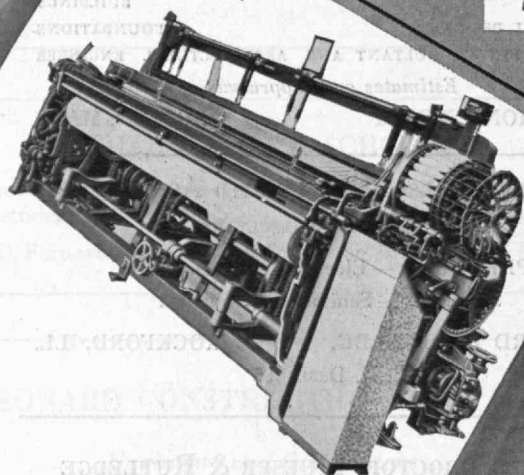
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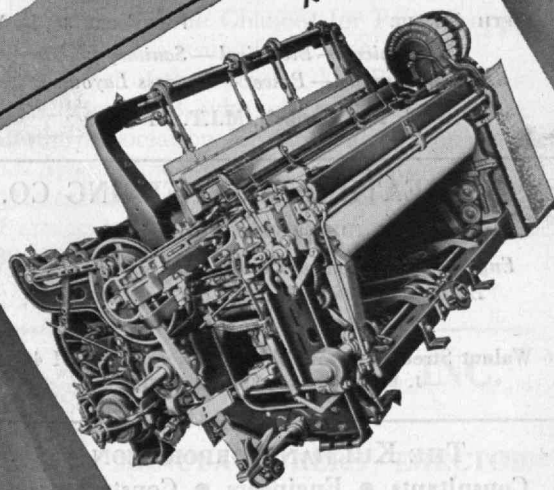
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# Alumni AND Officers IN THE News

## Distinguished Alumni

LESTER D. GARDNER'98 received The American Legion Award of Merit for "His many years in actively aiding in the development of aviation, especially his founding the Institute of the Aeronautical Sciences." The presentation was made by Lieutenant General JAMES H. DOOLITTLE '24 and Colonel E. E. ALDRIN'17 at a dinner given by Air Service Post 501 at the Lotus Club in New York on June 3, 1953.

RAYMOND C. REESE'20 received the 1953 Award of The Concrete Reinforcing Steel Institute for his "contributions to reinforced concrete construction through design," on April 30 at the Institute's 29th Annual Meeting. The Award consists of \$500 accompanied by a Certificate of Award and is given for research contribution to the advancement of reinforced concrete, and noteworthy contributions to the theory of reinforced concrete design or improvements to reinforced concrete practices.

The Reverend SAMUEL H. MILLER'21, Minister of the Old Cambridge Baptist Church, Cambridge, Mass., received the honorary degree of doctor of divinity from Colgate University on June 15.

JOHN TWISS BLAKE'24, director of research of the Simplex Wire and Cable Company, Cambridge, Mass., received the 1953 Charles Goodyear Medal which is conferred annually by the American Chemical Society's Division of Rubber Chemistry. The medal will be presented to Dr. Blake at the Society's 124th national meeting in Chicago next September.

DIMITRI TRONE'24, General Electric Company, Rio de Janeiro, has been elected a fellow of the American Institute of Electrical Engineers.

WILLIAM SHOCKLEY'36 was awarded a Certificate of Appreciation by the Department of the Army for his "outstanding contributions to the Army and to the National Defense effort" while serving on the Army Scientific Advisory Panel.

MARTIN DEUTSCH'37, Associate Professor of Physics, M.I.T., BERNARD T. FELD, Associate Professor of Physics, M.I.T., WITOLD HURCEWICZ, Professor of Mathematics, M.I.T., and JOHN C. SHEEHAN, Professor of Chemistry, M.I.T., were among the winners of the Guggenheim Fellowship Awards for 1953.

JAMES W. BARTON'39 and GEORGE C. GESTER, JR., '41, were awarded Sloan Fellowships for participation in the Executive Development Program at M.I.T.

## On the Up and Up

FRANCIS F. DU PONT'17 has been appointed commissioner of the Bureau of Public Roads, effective April 1.

HENRY E. RICHARDS'18 was promoted to the rank of Professor of Electrical Engineering, and MARTIN W. ESSIGMANN'47 was promoted to the rank of Professor of Research in Communications, both at Northeastern University; the appointments were effective on July 1.

RICHARD L. BOWDITCH'23 was elected president of the Chamber of Commerce of the United States.

JOHN LAWRENCE'32 was elected vice-president of engineering of the Joy Manufacturing Company on May 1.

THOMAS C. KEELING, JR., '35, has been appointed president of Mathieson Hydrocarbon Chemicals Division of Mathieson Chemical Corporation.

HENRY T. MUDD'38, Vice-president and General Manager of the Cyprus Mines Corporation, was elected a director of California Bank on March 9.

MILTON M. PLATT'42, Associate Director of the Fabric Research Laboratories, Inc., Boston, was elected a vice-president of that organization.

## Platform Personalities

AUGUSTUS B. KINZEL'21, President of the Union Carbide and Carbon Research Laboratories, Inc., of New York, discussed "Research and Industry," at a session of the second annual industrial conference of the Technical Societies Council of the Niagara Frontier on April 22.

PROFESSOR WALTER C. VOSS'32, Head of the Department of Building Engineering and Construction, addressed the Convention of the National Lime Association at Hot Springs, Va., which was held from June 8 to June 10. Professor Voss's subject was "The Dangerous American Horizon."

V. LAWRENCE PARSEGLIAN'33, Director of the Research Division of the New York Operations Office of the U. S. Atomic Energy Commission, spoke at the luncheon of the Brooklyn Rotary Club on March 11. His subject was "Some Fruits of the Atomic Energy Effort."

GEOFFREY BROUGHTON'36, Chairman of the University of Rochester Chemical Engineering Department, gave the first of a new series of annual lectures at Lowell Textile Institute, Lowell, Mass., on March 18. Dr. Broughton chose for his subject, "Materials, Metals and Minerals."

## Armchair Science

HARRY COLE'21, is the author of an article entitled "Approximate Elastic Spectrum of Acoustic Waves in AgCl from X-Ray Scattering," which appeared in the

April, 1953, issue of *Journal of Applied Physics*.

FREDERICK E. TERMAN'24, and JOSEPH M. PETTIT are coauthors of the book, *Electronics Measurements, 2nd Ed.* (New York: McGraw-Hill Book Company, Inc., April, 1953, \$10.00).

A. R. ROGOWSKI'28, is the author of a new textbook entitled *Elements of Internal-Combustion Engines* (New York: McGraw-Hill Book Company, Inc., May, 1953, \$5.50).

PIERRE M. HONNELL'39 is the author of an article entitled "A New Universal Right-Hand Rule," which appeared in the April, 1953, issue of *Electrical Engineering*.

CHRISTIAN J. MATTHEW'43, Arthur D. Little, Inc., presented a paper written jointly with ROBERT VAUGHN of Godfrey L. Cabot, Inc., on "Markets for Ammonia and Ammonia-Based Chemicals in New England" at the American Institute of Chemical Engineers Spring Symposium in Boston on April 8.

## Obituary

ERNEST C. CONGER'90, February 28.  
ERNEST A. LESUEUR'90, March 28.  
CHARLES V. ALLEN'93, March 15.  
LORING E. PIERCE'93, May.  
BENJAMIN A. LOVELAND'97, May 8.  
ROBERT S. LUNT'97, April 7.  
LUTHER R. SWAIN'97, May 18.  
MILAN V. AYRES'98, February.  
FREDERICK H. JONES'98, April.  
HERBERT E. LAWRENCE'98, April 22.  
FRANK I. PECKHAM'98, March 2.  
WILLIAM W. RUSH'98, December 29.  
THEODORE C. TUCK'00, May 21.  
GEORGE N. WHEAT'04, date unknown.  
CARL E. DANFORTH'05, May 5.  
ROSWELL DAVIS'05, April 19.  
HARRY W. DONALD'05, May 14.  
TOM W. OSGOOD'05, Early 1953.  
HOWARD H. BROWN'06, March 26.  
EDWIN FRANK'06, April 28.  
FREDERICK W. AMADON'07, May 4.  
L. POMEROY RUSSELL'07, May 14.  
EDMUND H. SQUIRE'07, May 17.  
JOHN W. SHEA'09, June 2, 1950.  
PAUL M. WISWALL'09, June 15, 1952.  
DONALD W. SOUTHGATE'11, February.  
JOSEPH V. WALSH'13, January 31, 1949.  
JACOB E. EDELSTEIN'14, February 28.  
CHARLES A. BLODGETT'15, April 14.  
HENRY M. FAVROT'16, May.  
WINTHROP E. NIGHTINGALE'18, April 16.  
GARNETT H. PORTER'18, date unknown.  
EDGAR E. HUME'21, January 24, 1952.  
HENRY K. DICK'30, January.  
LOUIS GOLDMAN'30, March.  
CARLTON H. MOORE'30, December 11, 1952.  
PAUL T. NIMS'40, date unknown.

\*Mentioned in class notes.

# News FROM THE Clubs AND Classes

## CLUB NOTES

### **M.I.T. Boston Luncheon Club**

On April 16, 1953, the following officers were elected for the ensuing year: Chairman — Robert L. Johnson'38, Boston Manufacturers Fire Insurance Company; Vice-chairman — Chenery Salmon'26, Merchants National Bank of Boston; Secretary-Treasurer — Vincent T. Estabrook'36, Standish, Ayer and McKay.

John E. Burchard'23, Dean of The School of Humanities and Social Studies, then told of the many changes which have taken place in non-professional education at M.I.T. Instead of English and History in the freshman and sophomore years, followed by general study electives, (if one was fortunate enough to have an open hour on his schedule) the last two years, as it was in the late 1920's, the Course is now co-ordinated over all four years and it is designed "to provide every student with some sense of man's experience . . . and some sense of the intellectual discipline that is involved in the more intensive study of a particular area of knowledge . . . different from that of science or engineering. Finally, it seeks to develop skill in accurately and effectively communicating facts and ideas orally and in writing." (Alas, gone is the incoherent and inarticulate engineer of the past.)

Based on the belief that the student at M.I.T. is mentally equal to, or possibly a little above, those at the average liberal arts college, the Faculty provides a course in the humanities which is the equal of that obtainable in any first-rate college in the country. To accomplish this, M.I.T. has attracted to its staff, a faculty which takes no back seat to the Ivy League.

The first two years are organized on a required introductory basis, which seeks to provide understanding of man's experience at particularly significant points in history. It includes study of the modern local community and spreads to larger and more complicated societies of the past and present. This is carried out through the medium of contemporary literature, art, grammar, music, and so on. Considerable latitude is given the student in his written work in that he may approach his assignment from the point of view of psychology, sociology, literature, art, economics, politics, or other significant avenues. In his last two years, the student elects intensive study in one or more of eight fields. Lest one think the M.I.T. student is interested solely in science or engineering, following are the current junior and senior registrations in each field: Economics — 307; Literature — 296; Psychology — 280; Political Science — 167; History — 119; Music — 85; Labor Relations — 80; Modern Language — 72.

Of the above subjects, economics, psychology and labor relations are required subjects in certain Courses (XV for example), so that these fields are part elective and part required — the others are all elective. Dean Burchard's staff has prepared an interesting booklet, *Liberal Education at Massachusetts Institute of Technology*, which may be obtained from the Information Office upon request.

The final meeting of the 1952-1953 season took place on May 21, with 51 members and guests present. Admiral Edward L. Cochrane'20, Dean of Engineering, spoke on the American merchant marine. In the past, our merchant marine has always gone through wide swings — down, in times of peace; and up, in times of national emergency. It is hanging on the ropes today in pursuance of this historical pattern, although some of its difficulties are its own fault. Yet the merchant marine is our fourth arm of defense: the only conceivable military conditions under which it would not be essential would arise if we were willing to fight on our own shores.

During World War II, we built some 6,000 merchant ships, but now have only 3,400 left in U.S. registry, including 1,500 Liberties. Of these 3,400 ships, 2,000 are still in mothballs, although 800 have been taken out and put back in service since the Korean War began. Because both the air and submarine threat to shipping will be much greater in any future major war than it was during World War II, the Liberties will be too slow for use in the war zone. The new mariner class of freighters, which has a sustained speed at sea of 20 knots fully loaded with 13,400 dead-weight tons, is the answer. We have constructed 35 of these ships, and 10 are fully completed and in service to Europe and Korea. As a matter of policy, a number of different yards and makers of the propulsion machinery have participated in the program. In summary, our merchant marine has good potentialities, but it needs and deserves public support.

The next meeting of the Club will be held on Thursday, October 15, at 12:15 P.M. at the same stand, the Union Oyster House, 41 Union Street. — VINCENT T. ESTABROOK'36, Secretary, 50 Congress Street, Boston 9, Mass.

### **M.I.T. Association of Cleveland**

The 1952-1953 season has drawn to a close in Cleveland with our final dinner meeting at the University Club on Wednesday, May 6. This was possibly as interesting a meeting as we have had for a number of years with a presentation by Robert Clark, of the Ohio Bell Telephone Company, explaining the work done by the Bell System in the transmission of television. This is a subject which is close to many of us, but perhaps we have known too little of the technology of transmission, and most of us came away from that meeting delighted with the work of the

Bell System in preparing and presenting lectures of this sort. We highly recommend that Technology Clubs in other areas make use of the Bell System Public Relations Service.

The Secretary and Treasurer of the Association have finished their three-year terms, and accordingly, a new Treasurer, J. P. AuWerter'38, was elected, and a new Secretary, W. Folberth, Jr., '41. Appointments were made by L. D. Fykse'41, Executive Vice-president, of two Assistant Treasurers, L. C. Turnock, Jr., '41, and J. F. Keithley'37, and one Assistant Secretary, J. S. Ewing'42. Two Assistant Treasurers were appointed in that we have had some difficulty in the past at our meetings by not having the Treasurer or Assistant Treasurer able to attend the meeting, and it was felt that by having three, our chances of having at least one of the treasurers with us would be much greater.

We also announced the awards of \$100 and \$150 to two applicants for scholarship. This money was taken from the fund we have been developing during the past two years, and was an amount of money sufficient, when added to Regional Awards of the Institute, to provide half scholarships for two men. We are not at liberty as yet to announce who the winners are, but our local newspapers will bear that information when the National Award of the Cleveland Alumni Association's Scholarships will be extended to the applicants and accepted by them. This is the beginning of what we hope will be a good contributing program in the future of the fund.

The meeting was led by H. P. Ferguson'27. The following were in attendance: P. S. Schmidt'06, A. Gould'10, J. W. Garland'21, L. W. Moss'21, H. H. Spengler'22, F. Wood'22, O. N. Stewart'23, C. E. Herrstrom'24, H. P. Ferguson'27, T. Ewald'29, D. McDaniel'29, H. G. Pankrat'39, J. C. King'33, R. H. Valentine'33, G. R. Young'37, A. Zimmerman'37, J. P. AuWerter'38, A. Cherry'38, F. W. Reuter'38, J. C. White'38, L. O. Fykse'41, M. Miller'41, L. C. Turnock'41, J. S. Ewing'42, R. J. Fay'42, K. Cayce'44, E. Schoenwald'44, R. J. deFasselle'46, E. Klipfel'48, C. Licht'48, W. K. Geist'50, C. C. Morton, H. Horowitz'51, R. Bell'52.

All of us in this area are delighted with the return of S. Floyd Stewart'24, who has come back to Cleveland this time to be assistant to the president of the Jack and Heintz Company. Floyd was with us for a number of years when he was an officer of the Leece-Neville Company. Some of you may not realize that one of our Directors of the Cleveland Alumni Association, Walter F. Munford'23, was elected president of the American Steel and Wire Company. We wish him the best of luck and many thanks for the counsel which he has provided, and we hope, will continue to offer to our local association. — G. RICHARD YOUNG'37, Secretary, 300 East 131st Street, Cleveland 8, Ohio.



## Detroit M.I.T. Association

The Detroit M.I.T. Alumni met at the University Club on April 23 for election of officers followed by the R.K.O. movie of M.I.T., *Men of Science*, and a very interesting presentation by H. C. Blankmeyer, Scientific Director of Owens-Corning Fiberglas Corporation on the future possibilities of reinforced plastics in the automobile industry.

Among those present were: Adam K. Stricker, Jr., '29, David R. Knox '27, H. C. Fuller '16, R. S. Gans '13, Patrick E. Colvan '49, J. C. Hobaica '47, Henry S. Young, Jr., '35, T. F. Morrow '35, Henry C. Johnson '36, Morgan Collins '27, John Rumsey '33, Charles E. Quick '33, R. G. Spear '26, John Longyear '26, Robert J. Meier '41, Robert William Wright '32, Lothrop M. Forbush '42, Frederick L. Fletcher '49, Willis Bugbee '21, Robert C. Doremus '14, Robert Carpenter '47, Harvey S. Freeman '46, H. F. Green '29, Edward Coe '33, C. Burnham '22, A. J. Slemmons '44, Byron Lutman '47, William B. Erickson '50, David M. Sutter '26, E. V. Martin '24, John M. Campbell '25.

Officers elected for the coming year year are: Adam K. Stricker, Jr., '29, President; Morgan Collins '27, Vice-president; Everett V. Martin '24, Secretary; Henry C. Johnson '36, Treasurer. — JOHN M. CAMPBELL '25, *Secretary*, 1333 Glengarry Road, Birmingham, Mich.

## M.I.T. Club of Fairfield County

The Club held a dinner meeting on April 23 at the Clam Box, Westport, Conn. The guest speaker was Dean E. P. Brooks of the School of Industrial Management. The Club very much enjoyed Dean Brooks's interesting and stimulating talk on the philosophy and organization of the new school, and his description of the problems which have been encountered and are being solved. A second feature of the meeting was the showing of the new movie, *Men of Science*.

The Club has been inactive for the past two or three years, but the enthusiasm which was in evidence at this meeting promises success for the regular program which the Club now has planned to undertake.

Donald P. Severance '38, Secretary of the Alumni Association, was a guest at the meeting. The members who attended were Nat S. Seeley '11, Philip Covitt '14, Richard G. Berger '16, Vincent Panettiere '17, Hubert E. Wellcome '17, Philo S. Shelton '18, Lloyd E. Raymond '22, William J. Schaefer '22, Miles Pennybacker '23, William L. Searles '23, David Evans '24, William W. Quarles '24, William H. VanDusen '24, R. F. Hibbard '27, Robert H. Smyth '28, M. J. Blackwood '30, Harland Danforth '31, Michael Kundrath '31, Agnew A. Talcott '32, Raymond L. Brown '33, Edward L. Wemple '34, Walter L. Wise, Jr., '34, J. Barton Champman '35, Oliver Hoag '35, William Fingerle, Jr., '36, Arthur M. Cohen '36, Gilbert C. Mott '37, Paul A. Vogel '37, Aaron M. White '39, Abraham I. Zimmer '39, E. H. Seim '40, William Mott '43, Jack Madwed '42, Karl E. Wenk '42, Eric M. Wormser '42, Angus N. MacDonald '46, John H. Midney '47, Arthur C. Loven '49, Charles E. Smith, Jr., '49, Alfred

J. Gallucci '50, Vello Kampman '50, Charles T. Chadwick '51, Thomas F. McHenry '51, George A. Bradley '52, Harry R. McCue '52, Joseph A. Sabo '52, Tom Bell '47, Bailey Curran, Oliver Fulton, Jr., '40, Clinton R. Hilliker '39, Harold McCrensky '38, Anthony R. Savina '30, Charles Smith and Stavenport. — GILBERT C. MOTT '37, *Secretary*, 92 Beers Place, Stratford, Conn.

## Indiana Association of the M.I.T.

For our April meeting we tried something different, namely a meeting in a member's home. Secretary Ramsey '17 and his wife invited the group to have a pitch-in-dinner at their home, and it was another Ladies' Night. Twenty-seven attended and had a thoroughly good time, at least so they stated. Harold Oshry '35 and Ray Ramsey, toggled out in white aprons and chef's caps, carved roasts, one rare, the other well done, so that everyone had a cut to his individual liking. Wives brought various covered dishes and desserts, and Harold Oshry prepared the Yorkshire Pudding.

After dinner President Frank Travers '23 introduced newcomers to the group. We were happy to welcome Professor and Mrs. John A. Ritchey '46 of Purdue University, and Mr. and Mrs. Gustav W. Klumpp '30 who have just returned from a three-year residence in Brazil where Mr. Klumpp was engaged in the educational field. Then Frank scintillated as an M.C., and, as far as we know, was stimulated by only one wine glass of sherry. Mrs. Ramsey gave an illustrated talk on "Around the Sun with Nature" consisting of color transparencies of various flowers throughout the year.

Members present were: Mr. and Mrs. John H. Babbitt '17, Mr. and Mrs. Edgar B. Godley '26, Mr. and Mrs. Richard J. Hall '48, Mr. and Mrs. Thomas G. Harvey '28, Mr. and Mrs. Lowell L. Holmes '23, Professor and Mrs. Samuel H. Hopper '33, Dr. and Mrs. Herbert Kent '49 — this was Herb's last meeting with us for two years as he enters the Air Force at the end of this month; Mr. and Mrs. James S. Sligar '41, Mr. and Mrs. Harold M. Oshry '35, and Mr. and Mrs. Spiros G. Pantazi '47. — J. RAYMOND RAMSEY '17, *Secretary-Treasurer*, 511 Spruce Street, Plainfield, Ind.

## M.I.T. Club of Northern New Jersey

Our last meeting of the year will have been held on June 2 at the Hotel Suburban in Summit when these notes reach you. A full report on that meeting will appear in the next issue. This wind-up meeting, known as the Spring Meeting, would give us our first speaker of the year from Tech, Professor Eli Shapiro of M.I.T.'s School of Industrial Management.

In the interim since our last meeting on April 8, two committees have been meeting and working out their assignments. The Nominating Committee will bring in a recommended slate to be voted on at the final meeting. A special committee to study costs and finances is also meeting in an attempt to find out more about the why and why not of printing, mailing and administrative costs. Since economy is in the air these days, we have hopes that

this committee will have good news for application in next year's activities.

Men who may move into the northern New Jersey area during the summer are urged to make known their whereabouts and mailing address to the Secretary at the address below so that we can be certain they receive notices for the first meeting in the fall. Direct communication of this sort is desirable in order to shorten the time needed for the usual flow of change of addresses through the Institute and back to the local club. Fall activities will probably start in late September or early October. It is hoped that there will be many new faces. — RUSSELL P. WESTERHOFF '27, *Secretary*, 823 East 23rd Street, Paterson, N.J. JACK F. ANDREWS '33, *Assistant Secretary*, 209 Tuttle Parkway, Westfield, N.J.

## M.I.T. Club of Oklahoma

To those who are interested in following the activities of M.I.T. Alumni in the various sections of these United States, we wish to report an occasion of importance. On May 1, 1953, the annual meeting of the M.I.T. Club of Oklahoma was held at the home of T. Q. Eliot '42, X, President of the organization for the 1952-1953 season. A delicious supper was served under Oklahoma skies which included, for the proper atmosphere and nostalgia, baked beans of Boston variety. Mmes. T. Q. Eliot, Richard Mungen, and Scott W. Walker, acted as charming hostesses and lent a welcome contrast to an otherwise all-male gathering. Following the supper, the officers of the Club for the ensuing season were sworn in. These included A. W. Chandler '37, II, — president, Willard A. Emery '21, II, — vice-president, Irving Hand '47, IV-B — secretary and treasurer, Walter S. Smith '30, X-A, and Richard Mungen '47, X, became members of the Executive Committee. Past treasurer J. R. Cowles '37, M.S., reported that the funds were in such a satisfactory shape that soliciting of dues was not immediately necessary. In consideration of such a fine state of solvency, motion was entertained to retain the outgoing panel of officers, but such motion was ruled out of order. Plans for the club activities for the coming year underwent lively discussion by members present, which included: S. Y. Andelman, '37, D. T. Axon, '44, J. P. Boggs, '30, D. E. Chapman, Jr., '47, A. W. Chandler, '37, J. R. Cowles, '37, R. E. Day, '48, J. E. Dew, '48, J. D. Eisler, '32, T. Q. Eliot, '42, W. A. Emery, '21, J. D. Fisher, '36, H. Grekel, '47, I. Hand, '47, W. E. Hardy, '45, D. K. Holway, '47, W. N. Holway, '43, W. R. Holway, '15, K. L. Hujsak, '47, S. J. Jatrass, '52, R. Mungen, '47, A. C. Reeds, Jr., '44, R. K. Schumacher, '47, D. Silverman, '29, S. W. Walker, '40, E. E. Woodward, '49.

For general information, M.I.T. Club of Oklahoma was organized on February 12, 1947, with headquarters in Tulsa. According to the latest statistics, there are 163 M.I.T. Alumni in Oklahoma — Classes '05 to '52. Sixty such Alumni reside in Tulsa proper. The presence of such a relatively large number of products of M.I.T. is due in main to the rapid industrial growth of the region. In particular, the activities of the petroleum industry play an important part in attracting engineering and scien-



tific personnel to Oklahoma. — J. D. EISLER, '32, *Secretary*, 3513 South Columbia Place, Tulsa, Okla.

### **Washington Society of the M.I.T.**

Months of planning, of intense and detailed efforts and unbounding confidence of the Washington Rowing Association were crowned on Saturday, May 16, 1953, by perfect rowing conditions for the 8th Annual Championship Regatta of the Eastern Association of Rowing Colleges (E.A.R.C.) on the Potomac River at Hains Point.

First, a few words about the Washington Rowing Association. The germ of the idea originated in the fall of 1951 with Barrett L. Crandall, of the Cornell Club of Washington, himself an ex-Cornell coxswain, who had the burning desire and conviction that Washington would make a perfect site for the famous Poughkeepsie Regatta. By May of 1952, the planning had progressed sufficiently . . . to a point that led to the organization of the Washington Rowing Association, Inc., with Crandall as president. It is a non-profit organization, with the initial objective of drawing the 1953 Regatta of the Intercollegiate Rowing Association (I.R.A.) to Washington. With the aid of the Greater National Capital Committee of the Washington Board of Trade, Washington alumni clubs of colleges participating in I.R.A. Regatta, civic and governmental leaders, a determined effort was made in the fall of 1952 to convince a visiting committee of the I.R.A. that the Potomac River would be an excellent site for the three-mile race. However, the fear that the three bridge spans over the Potomac from Memorial Bridge to Hains Point might be a "coxswain's nightmare" led the I.R.A. to decide to hold its 1953 Regatta at Syracuse, N.Y., where the event had been successfully staged in the preceding year.

Undismayed, Crandall and the W.R.A. associates finally succeeded in persuading the E.A.R.C. to hold the heavyweight Sprint Championship Regatta on the Potomac. The bridges would not be a problem since the Spring races are 2,000 meters (approximately 1¼ miles) in length, and hence the starting line would be below the last bridge and the finish line off Hains Point.

The tremendous amount of detailed work in preparing for the Regatta, required at least the full time of a director. Upon Crandall's resignation as president of W.R.A. he was soon appointed as W.R.A. Executive Director. Rear Admiral A. H. Van Keuren (Ret.), and ex-Navy oarsman was elected president.

The E.A.R.C. spring championship races are the youngest (the first race in 1946) and comprises the largest number of college rowing crews of all intercollegiate regattas. It has two events — lightweight or 150-lb. crews, and a heavyweight set of crews, with the same colleges generally participating in both regattas. Both are scheduled for the same day but at different locations — the heavyweight at Annapolis, and the lightweight at Princeton. As noted before, the heavyweight Sprint Regatta was moved onto the Potomac at Washington for this year.

This year's heavyweight regatta included 32 crews from 13 colleges in the three scheduled races — Freshman, Junior Varsity and Varsity races, with the following participating colleges: Boston University, Columbia, Cornell, Dartmouth, Harvard, M.I.T., Navy, Pennsylvania, Princeton, Rutgers, Syracuse, Wisconsin, and Yale.

For the Freshman races, 11 colleges entered their crews, Rutgers and Wisconsin abstaining. Nine Junior Varsity crews competed — Boston University, Dartmouth, Rutgers and Wisconsin not entering. Twelve of the 13 colleges entered their crews in the Varsity race, Dartmouth not entered. It is noted that Rutgers and Wisconsin entered only in the Varsity, that Dartmouth competed only in the Freshman races, and M.I.T. was among the nine colleges who entered in all three races.

Prior to 1953, the E.A.R.C. Sprint Championship Regatta has had one trophy, the beautiful \$7,000 Rowe Cup for the single winner of maximum points in all three races based on a scoring system given below. More often than not, winning crews of individual races received no material reward, but carried home the glory of success. But this year through the magnificent spirited rowing enthusiasts of Washington, three new trophies were established for the first time, for winners of each of the three individual races. These new trophies are The Washington Evening and Sunday Star Cup awarded to the winner of the Varsity Race; the Richard A. Glendon (by Navy Alumni Association) awarded to the Junior Varsity Race winner; the Charles E. Courtney (by Cornell Club of Washington) awarded to the Freshman Race winner.

The Rowe Cup, donated by M.I.T., was the gift of Charles Hayden '90. It honors the memory of Dr. Allen Winter Rowe, a former M.I.T. Faculty member. Dr. Rowe served for 16 years as Chairman of M.I.T.'s Athletic Board. It was under his leadership that crew became a Varsity sport at M.I.T. Rowe Cup Scoring: Winner — Varsity 10, Junior Varsity 8, Freshman 6; 2nd Place — Varsity 6, Junior Varsity 5, Freshman 4; 3rd Place — Varsity 3, Junior Varsity 2, Freshman 1.

The college crews and coaches began to arrive in Washington on Thursday evening and Friday morning. The M.I.T. group arrived at Union Station, Friday morning on the night sleeper from Boston (also the Harvard crew), and were met by representatives of the Washington Society of M.I.T., including the Executive Committee. High up in the Willard lobby, the crew confronted a new version of perpetual motion. A good-sized M.I.T. banner tied by a rope across the top edge kept swaying from side to side like a pendulum with cyclic periodic speeds, from morning to night.

The start of the Regatta was about one mile downstream from the famous Lincoln Memorial. All sprints were over a 2,000-meter (1 mile and 427 yards) course and rowed along the west seawall of Hains Point. Entire length of course is visible from any point along this wall. The morning qualifying heats started at 9:00 A.M. for freshman crews, 10:00 A.M. for the junior varsity and 11:00 A.M. for the varsity crew heats. The first three crews in

each heat competed in the final races in the afternoon.

In the morning trial heats the M.I.T. freshman crew placed second at six minutes. In the afternoon freshman finals the Cornell crew for first place at 6:24.4 minutes. In the afternoon freshman finals the M.I.T. crew came in fourth at 6:29.0 minutes with Cornell nosing out the Harvard freshmen at 6:20.5 and 6:20.8 minutes, respectively.

Although the M.I.T. junior varsity and varsity crews were eliminated in the morning heats (having come in fifth and sixth in each race), we are proud of the mighty effort they put forth. An improvement of about only 10 seconds in each race would have placed them as winners. In no way should there be discouragement in the performance, but with adamant will and perseverance, next year we shall be winners. We in Washington are rooting for you.

This annual 8th Regatta was won by the Navy unbeaten mighty crew to make its 18th straight win this year. The varsity race was the most exciting when the Harvard crew, at one time trailing Navy by two full lengths, applied its power to come in second, nosed out by 25 feet by the Navy crew. The junior varsity race was also won by Navy by two full lengths (the widest margin of the day) at 6:15.7, Cornell — second at 6:20.7 and Harvard, third at 6:26.0 minutes. It was the 11th in a row for Navy's jayvee.

Thus the Navy obtained 18 points for the regatta and thereby retained the \$7,000 Rowe Cup, which it had won at Princeton last year. Other colleges with Rowe Cup point totals were: Second, Harvard, 12 points; Third, Cornell, 11 points; Fourth, Wisconsin, 4 points; Fifth, Princeton, 1 point. — SAMUEL H. MANIAN '22, *Secretary*, 5707 26th Street N., Arlington, Va.

## **CLASS NOTES**

### **• 1890 •**

On the way North from Florida Packard called on two members of the Class of '90. The first was Henry B. Hayden at 33 Governor Street, East Hartford, Conn. He took the Course in Architecture and followed it for a good many years but for something more than 20 years past, up to the time of his retirement, he had been with the Factory Mutual Insurance Company. Aside from some arthritis which slows him down for walking, he is in good condition. The second, Spaulding Bartlett, we found actively engaged in business at his office in Webster, Mass. He is still chairman of the First National Bank of Webster but seemed more interested in getting his summer place on Cape Cod opened up so that he and Mrs. Bartlett can get a rest before it is taken over by the children and grandchildren for the summer.

Two of our classmates were in the hospital during March and April. Harry Burley was having too much trouble with his back but Mrs. Burley reports him as much

more comfortable and she was hoping to have him back home before the end of May. Bertram Lenfest had an operation the last of March but was able to travel by the end of April and has gone to Maine to visit his daughter. He writes that he feels some question as to his ability to carry on at his old home in Brooklyn, N.Y., which he has occupied for many years while head of the Metal Working Department of the Brooklyn Technical High School. He thinks he may sell and perhaps go and live with his daughter in Maine. John C. E. deBuliet has moved from the apartments where he has been living for some years to the Longreen Nursing Home at Melrose and Bolona Avenues, Baltimore. Ernest A. LeSueur who took Course VI died March 28, 1953 at Ottawa, Canada, where he had lived most of his life. His work was mainly electrochemical and our first record in 1896 was at Rumford Falls, Maine, where he was general manager of the Electro-Chemical Company. However, he was applying his technical knowledge in his senior year, concerning which he wrote to Charles Sherman in 1951: "I had the misfortune to invent, while still a student at Tech, what was, for more than 30 years thereafter, widely known as the LeSueur process until it gradually merged into the general technology of electro-chemical industry. This invention (*maintenance of excess anolytic pressure* in a diaphragm cell for splitting brine into chlorine, caustic soda and hydrogen) transformed what was known as the heavy chemical industry from a curse to any countryside in which it was established to a quiet process, operating not far above blood-heat, for splitting brine as above. Its world yield to date is well up in the billions of dollars, and it increases year by year. In speaking of it as a misfortune I mean that, in my ignorance of business and patents, I only got myself into a mess with a myriad of imitators all over the world, who naturally took advantage of the faulty claims drawn by the patent attorney into whose hands my friends put me in January, 1890, whose specialty, I later learned, was boot and shoe machinery. When, at Tech in early 1890, I told Professor Cross of the work I was doing on the side, and for my thesis. He wished me luck, and told me I must expect no help from him or any of the other professors. Electrochemistry was a sealed book to him and them." On June 8, 1950, LeSueur had written to Packard, "Actually my electrical work was mainly electrochemical. I also developed a solvent for the fraction of 1% of copper that passes the concentrating tables at Calumet, which the Calumet bought; and developed and patented in Canada the modern process of extracting oxygen from air. Also did some very amusing work on acetylene. Did a lot of work on utilizing war-residue explosives from W.W.I. Among other things, this included grinding cordite under water in large quantities." The last the Secretary had from him was written on July 8, 1950, as follows: "The kaleidoscopic changes in our points of view which are coming along in the wake of the new discoveries give one the feeling of never having left the nursery. This contrasts with our views on the memorable third of June 60 years ago. What

may be called the new knowledge was pecking at its shell then. Perhaps we were fortunate in not knowing that."

Ernest C. Conger, 86 years of age, died at Olive, Calif., on February 28, last. In the first letter received from Conger, by Professor Locke, perhaps 20 years ago, he stated he was in the Class of '89 but was associated more with '90. His name does not appear in the class records and the Registrar's Office suggests that he may not have finished one term. Conger wrote that he came from Manchester, Iowa, but went to the Pacific Coast in 1897 and worked for the Pasadena National Bank. Later he bought 82 acres of land near Orange, Calif., planted orange trees and has been raising 8,000 to 10,000 boxes a year. — GEORGE A. PACKARD, *Secretary*, 53 State Street, Boston 9, Mass. CHARLES W. SHERMAN, *Assistant Secretary*, 16 Myrtle Street, Belmont 78, Mass.

## • 1894 •

A brief letter from George Sherman of Akron recently indicated the "big junk man of Akron" is still going strong. He sent a copy of a photograph of the Course X group known as the "baker's dozen" as they worked in the foundry under instruction of the beloved Lambirth'95. George himself is the lone survivor of the group. A copy of the photograph was sent to the Eastman Kodak Company so that the officials there might see how Frank Lovejoy looked in his working clothes in student days. It was an interesting picture of a brilliant group, and how young they looked! The Secretary will preserve it carefully so that it may be shown at our 60th anniversary reunion in 1954. George expressed the intention of being at his fraternity reunion in June, but unfortunately it is scheduled too far ahead of Alumni Day to permit his attendance there also. Don't let this happen next year, George.

The Secretary was in Washington from May 15 to May 20, in attendance at the Convention of the Refrigerator Research Foundation of which he has been chairman of the board of governors during its 10 years of existence. Rather against his judgment he was re-elected to the position which has given him much pleasure and many friends in past years. While in the great capital he made several attempts to contact Charles Abbot by telephone, and even invaded his sky-high office in the tower of the Smithsonian, and left a letter for him. Also, he picked up Abbot's latest report as research associate (a position he has held since his retirement as Secretary of that great Institution). This report, dated May 12, and thus only a few days old when taken, is on the long-range effects of the sun's variation on the temperature of Washington, D.C. Its preparation involved intensive studies over many years. Abbot has shown that "the sun's output of radiation occurs regularly in 23 periods, all integrally submultiples of 22½ years." It was a disappointment not to see Abbot nor to talk with him by phone.

W. L. Woollett recently forwarded to the Secretary a partial list of the many important office buildings, theatres, warehouses, clubs, and fine residences of which he has been the architect in his many years of

practice in Los Angeles. The list is truly an impressive one. Woollett is also gifted as an artist, and has done many murals and water colors in decoration of his buildings. His career adds to the composite fame of the Class. — SAMUEL C. PRECOTT, *Secretary*, Room 16-317, M.I.T., Cambridge, Mass.

## • 1895 •

Apparently we have had little news during the past 30 days but your Secretary wants you to know that he is still "plugging" along, and at the present time qualifies for four meals daily. He hopes the rest of you feel as comfortable. The letters received recently from a few of our mates were reported and deeply appreciated. All things being equal, you will find your Secretary in the wilds of New Hampshire during the month of July with his Boy Scouts. Willard H. Watkins has changed his address from Roslindale, Mass., to 226 Taunton Street, Wrentham, Mass., care of Mrs. S. R. Gilmore. — LUTHER K. YODER, *Secretary*, 69 Pleasant Street, Ayer, Mass.

## • 1896 •

This July issue closes the books as to class notes for the present fiscal year. Your Secretaries have been grateful for class note material received. Please keep in mind the need for a new batch for another year. The alumni functions will have been completed before this Review issue comes to hand.

As a matter of record we note the following replies from those who were unable to participate in the June Reunion. From H. H. Tozier: "Sorry that I will not be among those present, My kindest regards to all of our classmates."

We have a change of address: Charles E. Batchelder, 1559 So. Calle Marcus, Palm Springs, Calif. Mrs. Katherine Dorrance, the wife of our recently deceased classmate, wrote to thank us for a letter of condolence from E. Northfield, Mass. George S. Hewins: "Because of home responsibilities I will not be able to attend." Jack Eynon: "My original plan to return to Boston for the class festivities has been overruled by an opportunity to fly across these 2,700 miles of the Pacific. For me a thrilling and novel experience. My best wishes to all."

Later, we received the following letter from Jack from Kauai, Hawaii: "Instead of journeying eastward as I had been seriously considering, I suddenly had an opportunity to go farther west in good company. The greatest thrill thus far has been our 2,700-mile flight over the Pacific, much at 20,000 feet, all unbelievably smooth. The name of this island is pronounced by the natives 'cow-eye.' It is about 40 minutes by air from Honolulu. We are scheduled to fly back to Honolulu this morning. Most of the two days was spent sightseeing in an auto driven by a native, half Hawaiian and half Chinese, a very good driver but hard to understand." Louis Freedman: "Sorry I cannot come and be with my Class. Time takes its toll, but we who remain, must continue to do our share fearlessly and well. Every good wish to the '96 survivors." (New address) 16 East 96th Street, Apartment 4B, New



York 28, N. Y. Irving S. Merrell sends his regrets. John Kelley reports that all is well with him.

We received a clipping from the *Schenectady Gazette* dated May 4, 1953, giving an account of the 8,000-mile safari in Africa made by Bill Coolidge and illustrated with pictures of elephants, giraffes, and so on. We hope to be honored at our Reunion in June with an illustrated lecture of his adventures through the hinterland of the great African game reserves.

From the Boston *Herald* of April 14, we quote: "Modern manners are put to shame by the Victorian elegance of Charles Hammond Gibson of Beacon Street and 'Forty Steps,' Nahant. This Proper Bostonian, although a graduate of M.I.T., Class of 1896, is the author of a vast number of sonnets, elegies and odes, considered by many to be as distinguished as he. His love of England dates from 1894 when he was secretary to Lord Northcliffe, publisher of the London *Times*, and many of his poems are dedicated to English royalty and statesmen. His ode to Queen Elizabeth II when she was a princess was acknowledged by her in a note from Clarence House. . . .

"Recently recorded by Mr. Gibson for the Lamont Library at Harvard University, a copy has been presented to Queen Elizabeth. Mr. Gibson also will read his poem to Hawthorne, written for the 10th anniversary of the founding of the Center, at a large meeting outlining the objects of the society which seeks to interest and bind together lovers of poetry throughout the English-speaking world. — JOHN A. ROCKWELL, *Secretary*, 24 Garden Street, Cambridge 38, Mass. FREDERICK W. DAMON, *Assistant Secretary*, Commander Hotel, Cambridge, Mass.

### • 1897 •

One of the phases of the recent call for dues sent out by your Secretary that gives a great deal of pleasure is the note or letter that invariably accompanies the check. To date, (May 16) 12 payments have been received, and the Secretary eagerly looks forward each day to the mailman's arrival hoping for additional returns. Like a message from the distant but not forgotten past came a letter from Jay E. Tone of Des Moines, Iowa. This letter was particularly pleasing since not only was Jay a course mate of your Secretary but for two years had an adjoining room to that occupied by your Secretary at No. 37 St. Botolph Street. The letter follows: "Dear John: You missed your calling. You should be a collector in the department of 'eternal' revenue. I have missed all the class reunions since the 25th because of untoward episodes or causes. You might say my life has been 'out of phase.' I hope my mental and physical processes will be functioning in 1957 so that I can attend our 60th reunion. With all good wishes."

It is with deep regret that we must announce the passing of Benjamin A. Loveland, Course I, on May 8 at his home in Medford, Mass. Mr. Loveland was formerly with the Boston Transit Commission and later with the Army Engineers. He was associated with the construction of the Sumner Tunnel, and was the supervising engineer for the Army in the construction of the Cape Cod Canal. He

was a member of the American Society of Civil Engineers. He leaves one son and one daughter.

With deep regret we must also announce the passing on April 7 at his home in North Weare, N.H., of Robert S. Lunt, Course X. Mr. Lunt was born in Newburyport, Mass. in May, 1874. Mrs. Lunt has very obligingly sent to us a detailed account of her husband's industrial life and we are privileged to reproduce it here just as it was written. "It is with profound sorrow that I must tell you of the passing of my husband and your classmate at M.I.T. He had not been well for about six months before his death. He retired from E. I. du Pont de Nemours Company in March, 1944, after 27 years with the company. His first position after finishing at Technology was with the Lowell Bleachery in Lowell, Mass. After about one year he went in 1898 or 1899 with Kuttroff, Pichard and Company, dyestuffs and chemicals at Boston and later at New York City. During those years he traveled from Canada to New Orleans, visiting mills all through the South as well as the North, demonstrating the methods for using the new dyestuffs and indigo. The first indanthrenes were coming into use then and he was busy for years on that type of work. In the meantime he went to the Badische Company chemical and dyestuffs plant at Ludwigshafen to observe their method of handling the new colors. Before World War I he worked at the Massachusetts Cotton Mills in Lowell helping to perfect uniform cloth for the Army. In 1917 he left the Badische Company and went to Du Pont. In September, 1917 he was sent to Shanghai, China, to see what the prospects were for Du Pont dyestuffs and indigo there (I went along too, and it was a wonderful trip). It was war time and travel was difficult. We spent days traveling through the dark twisted streets in rickshas, hunting out dye houses and small textile plants where most primitive methods were used, gathering information to take back home. Returned to the United States in February, 1918, and made a second trip in 1919. We stayed nearly a year. My husband carried the first barrel of Du Pont indigo with him on that trip. Again I went with him. This time we took trips out of Shanghai up north to Peiping and even to the Great Wall on the Manchurian Border. Back through Tientsin and Nanking, and so on to Shanghai. We found China much changed on this second trip, great unrest and not too friendly interest toward foreigners (us). Returned to the United States in 1920 and Robert to the Boston office of Du Pont. In 1938 another move, this time to New York City and the Du Pont office there. This time in textile service section, where he stayed until his retirement in 1944. We left New York in March of that year and came to our log cabins on lovely Mt. William Pond. In 1948 our son, Robert, Jr., died leaving his widow and six children. The little ones were small and very interesting and dear to both of us, they still are. For us it was a real retirement and we seldom left the place. Robert was very much interested in all out-of-door things and kept busy all of the time. We have a bird feeding station, and he did enjoy watching the birds, es-

pecially the chickadees, that loved to alight on his cap or his hand after sunflower seeds. Just this last summer he seemed not to be so well, and in spite of all the things they did for him he just slipped away. It is a strange world without him." At the last moment just as copy for this column was being sent to the Review editors we learned from a newspaper item of the death on May 18 of Luther R. Sawin, Course V of Arlington, Mass. Mr. Sawin was retired but was formerly bacteriologist for the New York City water supply. His education included courses at Columbia University and at Chicago University. He was a member of the Ethical Society and Psychological Society in New York city. He was not married and leaves one sister.

The Class of '97 extends its most sincere sympathy to the families of these deceased classmates. — JOHN A. COLLINS, JR., *Secretary*, 20 Quincy Street, Lawrence, Mass.

### • 1898 •

We are writing these notes about a month prior to the 55th. The turnstile continues to click, as Lester or George are receiving letters from classmates advising, "We are coming." What will be the total? Your guess is as good as mine. Already for the notes for the June Review, we revised the total upward once and still it continues to mount. If for some reason — distance, health or what not — you decided that you could not attend, you will have the pleasure during the summer of guessing the "dem total" as Mantellini phrased it, and imagining the festive occasions of the 55th; of which, as much as possible will duly be reported.

The '98 long distance driving contest, initiated by Bob Lacy and Jack Bleecker, continues to function. We have letters from Dave Fønner and Frank Perry. Dave writes from the Hotel 2400, 16th Street, Washington, D.C.:

"From 1898 notes in Technology Review for February, 1953, we are engaged in a long distance driving contest, so far limited to passenger cars. Thinking that a diversion might be interesting I wish to record one to the West Coast in 1927 for the International Fire Chief's Convention in Portland, Ore. I loaded the chassis for a 1,000-gallon fire pumper on a Luekenbach freighter in Brooklyn, N.Y. Three weeks later 'we' disembarked at San Francisco, Calif., and ferried across the Bay to Berkeley where we installed the pump, passed the official pumping tests of the National Board of Fire Underwriters, added some splash boards and fenders in a local sheet metal shop and got away from Berkeley late one hot Thursday afternoon for an exhibition that opened in Portland, Ore., the following Monday morning.

"This job weighed about 10 tons stripped. I say stripped because we added equipment, hose and final painting, striping and lettering as we went along. The job was mounted on high pressure pneumatic tires and had a locomotive bell, so that we were able to make pretty fair progress. I had an assistant driver and we took two hour turns at the wheel. We made Redding, Calif., the first night with



the thermometer 104 at midnight. We decided to forego the pleasure of sleep and forged right on to Medford, Ore., where we lost a lot of time getting clearance papers, but managed to reach Roseburg, famous for having the lowest wind velocity of any town in the U.S.A., and hence the roses. Here sleep won out for a few hours. We were up with the sun and made Portland at noon on Saturday — 721 miles, in just 48 hours gross. Got the job washed, dried and primed Saturday, finished, painted, striped, lettered and varnished on Sunday, in the show early Monday morning and sold it to the Seattle, Washington Fire Department on Tuesday." Thanks, Dave, and congratulations.

Frank writes from 93 Calla Street, Providence 5, R.I.: "I have read with great interest the 1898 article appearing in the February, 1953, issue of *The Technology Review* especially the part relating to long drives in one day. On January 17, 1953, I left my home at 8:45 P.M. in a Dodge touring car owned and driven by a friend residing in West Chatham, Mass., accompanied by his wife and their 11-month-old daughter. The first real stop was made at 4:30 P.M., Sunday, the 18th, at the Humpty Dumpty Motor Court, six miles north of Raleigh, N.C., a distance of 708 miles driven continuously except interruptions for meals and gasoline. Monday, the 19th, we drove 532 miles and on Tuesday, the 20th, we arrived in North Miami, Fla., at 6:00 P.M., a total distance of 1,590 miles. We went to Key West and returned, 358 miles, in one day, spending a week in and around Miami. The trip home via routes 27 and 1 was completed on Friday at 4:00 P.M., January 30, 1953, having left North Miami on Tuesday morning, the 27th, — total distance traveled 4,080 miles in 13 days, 19½ hours." Thanks, Frank. So far, you and your friend seem to have the record for continuous driving, 708 miles in one day, night and day driving.

We also have received a second note from Dave Fenner, written from his permanent address, 288 Elm Road, Falmouth, Mass., and advising that he is finished with the assignment in Washington on account of World War 2A. Does that mean that the "cold war" is over, Dave? With characteristic humor, he writes, "Have no desire to 'oaf, so if you run across anything that looks promising for one who is fit, abie and willing and 'young at any age,' just drop a line." A word to the wise is sufficient, all ye boys and girls of '98. Dave also adds in an interesting postscript, "50th Wedding Anniversary on April 15." Congratulations, again, Mr. and Mrs. David Fenner!

We have been informed of the passing recently of the following classmates: Milan V. Ayres, Chicago, Ill.; Frederick H. Jones, Rochester, N.Y.; Herbert E. Lawrence, West Acton, Mass.; Frank I. Peckham, Delmar, N.Y.; and William W. Rush, Denver, Colo. We would appreciate further information concerning these classmates.

We wish to thank Walter A. Hall '95, for the following letter concerning our classmate, Lyman Arnold. "Although unable to give you much information regarding Lyman Arnold, requested by you in the '98 class notes of the March issue of

*The Technology Review*, I can give you a few words of past history which may be of interest to you. For 15 years, in the early part of his industrial experience, Lyman was in engineering charge of a branch of the General Electric Company's product which was a part of my direct responsibilities. Notwithstanding the fact that his financial resources were adequate to support him in ease, not to say luxury, he chose to apply himself assiduously to his elected task, and was, all during that period, as industrious, efficient and loyal as one could ask for from an aid. Since we both severed our connection with the above named company many years ago, I lost contact with him and have little knowledge of his later life. I do know, however, that, a bachelor, he lived alone in Boston, was active in some form of welfare work, and cherished his association with Trinity Church, where he served an unbroken period as usher which, I believe, exceeded a half century. If one should attempt to describe his life with a single word, it should be 'faithful.'"

We acknowledge with thanks the receipt of a booklet with the compliments of the Daniel Guggenheim Medal Board, 29 West 39th Street, New York. This booklet is entitled, *Pioneering in Aeronautics* with a subtitle, "Recipients of the Daniel Guggenheim Medal." It comprises 147 pages in addition to frontispiece, Foreword, pictures of Daniel Guggenheim, Harry F. Guggenheim and a Biographical Roll of Recipients. The Foreword states in part, "When Harry F. Guggenheim, son of a generous father, initiated this award as a memorial to that father's great interest in aeronautics . . ."

The medal, therefore, is regarded as the greatest honor that can be presented for a lifetime of work in the aeronautical field. The recipients of the Daniel Guggenheim Medal can truly be regarded as occupying enduring places in the "Hall of Fame of Aviation." Then follow biographical sketches with portraits, of the 24 recipients from 1929 to 1952, commencing with Orville Wright in 1929. M.I.T. will recognize among recipients: Jerome Clarke Hunsaker '12, Medallist for 1933; James Harold Doolittle '24, Medallist for 1942; and Lester Durand Gardner '98, Medallist for 1947. The citation for the Medallist for 1947 reads: "For outstanding achievements in advancing aeronautics, particularly for his conception and organization of the Institute of the Aeronautical Sciences." There is a five-page biography, from which we will quote in full the first paragraph.

"It has fallen to the lot of Lester Durand Gardner, as the result of farsighted vision and of selfless devotion to a chosen task, to create a living monument which came to full stature under his guidance, and remains, in his retirement, the leading technical society for the benefit of aviation. Of Lester Gardner, it has been said that he probably knew — not on the plane of mere acquaintance, but on that of warm friendship — more persons in the field of international aeronautics than any other living man." The Class is honored in the person of its distinguished classmate.

There are a flock of new addresses for the revision of your Golden Anniversary *Directory*. Roger W. Babson, 250 Cliff

Road, Wellesley Hills 82, Mass.; Maurice F. Delano, Apt. 1A, 26 Hannum Drive, Ardmore, Pa.; Frederick C. Gilbert, 1375 East Mayberry Avenue, Hemet, Calif.; Van Rensselaer Lansingh, The Mainstay, Stonington, Maine. — EDWARD S. CHAPIN, *Secretary*, 463 Commercial Street, Boston 13, Mass. ELLIOT R. BARKER, *Assistant Secretary*, 20 Lombard Road, Arlington, Mass.

## • 1899 •

Since writing about Henry James's professional career more information has been received through the Wisconsin Employees Mutual Insurance Company. On leaving M.I.T. he joined the staff of the Associated Factory Mutual Insurance Company in Boston. He was next connected with a Westinghouse subsidiary in Bridgeport, Conn. From there he took over the management of the Milwaukee Basket Company and through this connection became associated with the Wisconsin Employers Exchange, probably the first of the reciprocal insurance firms. Henry's specialties included extraterritorial aspects of compensation insurance, maritime jurisdictional questions and some of the more involved coverage problems. Among his hobbies was keeping weather reports and comparing them.

Mrs. George F. Atkins has supplied me with the following additional information concerning George who died on January 24. George's grandfather was one of the founders of the E. C. Atkins Saw Works. After George graduated from M.I.T. he went with this firm in Indianapolis and learned the business. A number of years later he took charge of the Seattle, Wash., branch for about two years. He then returned to the home plant and remained there until his retirement — a period of over 40 years.

Jacob Stone has recently been in criminal court again. But don't get excited. He served on the jury. A good piece of work for a "Senior Citizen."

By the time this is read the June Alumni Day will have come and gone. A full account will appear in the November issue. Bear in mind that next year will be our 55th Reunion. Send your Secretary suggestions as to how it had best be celebrated. Where would you like to have the class affair held? — BURT R. RICKARDS, *Secretary*, 381 State Street, Albany, N.Y.; MILES S. RICHMOND, *Assistant Secretary*, 201 Devonshire Street, Boston, Mass.

## • 1901 •

You will recall that the class officers decided it would be a fitting gesture for the Class to provide some sort of memorial to Lamont du Pont for whom we had such respect and affection and who did so much for the Class. We learned that he was very much interested in the Delaware Hospital in Wilmington for which he had done a great deal. By corresponding with the hospital authorities we found that they could use a wheel chair. They were also in need of a special type of hospital bedside lamp and after consultation by correspondence it was decided to present the hospital with four of these lamps suitably marked showing that they were a gift from our Class. The lamps came from the Hill-Rom Com-

pany in Indiana and are very ingeniously made for sick beds. The markers were small brass plates attached to the shades of the lamps and were made by our classmate John McGann who, as you know, is the head of a firm of "Brass Mongers" in Somerville, Mass. They bear the inscription "In Memory Of Lammot du Pont By His Classmates, M.I.T. 1901." The lamps are now in service in the hospital. I know that you will be glad to hear of this memorial and will take pride in the fact that the Class has recognized the feeling that we all had for Lammot.

I have just received a letter from the director of the hospital from which I quote: "These lamps, bearing the attractive plate that you and your associates made available to us, have been distributed on separate floors of the hospital in order that they may cover a broad cross section. The memorial plate, as you requested, has been put on the front of the shade where it will be clearly visible, and I am sure that there will be many who will take note that this tribute has been made. I need not tell you, I am sure, that I am extremely grateful to you in behalf of the Delaware Hospital for this gift, and also most appreciative of the recognition that has been given to Mr. du Pont's memory."

Now for more of the Class Letter replies. Howard Wood in Connecticut says: "Retired, yes, but have just come in from shoveling snow about the house and garage. A Christmas card from Fred Sexton carried a shot of his wife and him with up-lifted snow shovels and the caption 'The most futile job on earth.' I make it unanimous." Albert Galusha, who lives in New Jersey, has not retired. He reports: "Chief Engineer of the Wellman, Galusha Gas Producer Department of Wellman Engineering Company. Thirty-six patents have been granted to me on Galusha Gas Producers. My gas producers have been put into use in more than 20 different countries on every continent in the world. They are built in U.S.A., England, South Africa, and later Australia." Joe Evans, whose marriage was reported not long ago, and whose address is 190 Havilah Street, Lowell, Mass., sends the following: "Retired - summer of 1946. Am not working at my hobby, namely, making pottery - copies of the South American pottery - because I am busy around my new home where we moved on January 19, 1953. Mrs. Evans and I thought it best to sell our 11-room house and buy a smaller one with bedrooms on one floor. We keep a maid who has a nice joint on the second. House is located just off Andover Street in a new subdivision where no houses are closer than 100 feet. It is opposite the Long Meadow Country Club."

John Boyle has just sent me a very learned dissertation on "Exploitation of Government-Owned Patents." Patents, as you know is John's life work. Frederic Bass, XI, who was at Oyster Harbors, reports from Minneapolis: "Retired in 1943 from the University of Minnesota. Executive Director of American Public Works Association 1943-1945. Retired 1952 as member State Board of Health after serving 21 years - three years as president. With other members of Course XI saw the beginnings of water and sewage purification.

tion. Now DeBerard is building the world's largest water purification plant as city engineer of Chicago." R. E. Dow, in Hamburg, N.Y., has retired and his present occupation is "nothing." (I wonder). W. G. Blauvelt, VI, living in Wellesley Hills, Mass., has also retired and is doing "nothing much." Will Kelley who, with his wife, attended our 50th, writes from Winnetka, Ill. "Retired five years ago. Try to follow the sun but schedule was fouled up last year as we went to California last August and stayed in Chicago this winter." Philip Potter, in New Jersey, who was also at Oyster Harbors, says: "I have not retired. I recently left the state of New Jersey Public Utility Commission, where I had been employed as senior water supply engineer, to rejoin Messrs. Buck, Seifert and Jost, Consulting Water Supply and Sewage Disposal Engineers, as an associate engineer." I have just noticed in the paper the death of the wife of John McGann in Somerville, Mass. As a Class we extend him our sympathy.

I still have considerable news from a number of Class Letter replies to report but it will have to go over until fall. I hope that these notes will remind those of you who have not yet replied that I am waiting for your data sheet. Tell us what you are doing. You enjoy reading about others. They will like to know about you. A pleasant summer to you all. - THEODORE H. TAFT, Secretary, Box 124, East Jaffrey, N.H. WILLARD W. DOW, Assistant Secretary, 287 Oakland Street, Wellesley Hills 82, Mass.

## • 1902 •

Dan Patch has called our attention to two errors made in processing his class President's letter of April 21, 1953. The letter as processed read: "Having passed our 50th, each member of '02 received a copy of each issue of the Technology." As written it was "Having passed our 50th, each member of '02 now receives a copy of each issue of the Technology Review." He expects that the recipients made the corrections as they read the letter but this is for the record.

The letter has brought two letters which we are glad to give here in the notes. Farley Gannett writes, "Dear Dan: I have just read your Class Agent's letter and President's letter on my return this afternoon from Washington where I went as I always do, to attend the annual meeting of the U. S. Chamber of Commerce, and I sit down promptly to do as you suggest.

"These annual meetings of the U. S. Chamber of Commerce are always wonderful meetings, with most inspiring men speaking. We had a short speech by President Eisenhower, which was crisp and to the point, in which he said that the world progresses by commerce and we of the Chamber of Commerce represent the trend of commerce which makes the wheels go around, which of course was not displeasing to us. He also said he was going to see that taxes were reduced, which also pleased us, but he did not say just when. He also said that they found conditions so terrible in Washington after 20 years that it has taken them a long time to find out what is what, and what can be done to reduce expenses and get the

budget balanced, because he is going to do that too.

"I guess I am one of the few of our Class who has not retired - anyway of the 30 of us who were at the 50th Reunion it seemed to me that most of them were in that category. Thank God, I am not yet.

"After we left you in June, Mrs. Gannett and I took the new *United States* steamship and went over to England for six weeks, coming back on the same wonderful boat. We traveled about 2,000 miles over England, Scotland and Wales, by automobile, in a nice English car, with an English chauffeur, and I fell promptly in love with England, which I saw last summer for the first time. I have been on most sides of it on the Continent and have been in several other foreign countries and continents but never in little old, green, fresh, healthy England before.

"My company has just bought a 500-acre farm with two habitable houses on it on the Eastern Shore of Chesapeake Bay and I am expecting to have some fun down there duck and goose shooting in the fall - crabbing, fishing, boating, and bathing during the rest of the year. . . .

"All my three daughters are married and living within 25 miles of us; seven grandchildren - so we get together a lot and it is awfully nice to be able to keep acquainted with kids as they grow up.

"I am still riding a horse but during the past year, due to a slowly healing broken leg I missed following hounds all last season but may be back at it next fall. I hope that Philbrick gets some notes from some of the other boys whom I would like very much to hear from."

Harlen M. Chapman writes to Dan from 1638 Via Tuscany, Winter Park, Fla. - "When I was in Boston last July, I had anticipated dropping in to see you. However, I developed a case of neuritis which made walking so painful that I could not get around. We were visiting Harlen, Jr., at 88 Mount Vernon Street and as I lived at 6 Chestnut Street my sophomore year at Tech, it brought back many memories of those days. That section of Boston didn't seem to have changed any in the past 50 years, except for automobiles parked everywhere. Shortly after we left my fifth grandchild, Judy, was born. A month later my oldest grandson, A. Z. F. Wood, Jr., was married to a Savannah girl, Eve Strong. Eve had graduated from North Carolina University last June, while A.Z., Jr., does not finish until next month. He had developed into an outstanding pitcher and several big league teams were trying to get him to sign up. However, he finally decided to give up baseball and since then has taken up journalism and writing, which takes up all his spare time. He'll probably have to serve in the armed forces when he finishes college.

"Winter Park is truly a garden spot and we think the best part of Florida. There are many deciduous trees and they give the city a New England appearance. It was originally laid out by New Englanders and by far the majority of the residents come from other states. It is not a tourist mecca, as the increase in winter is only about 3,000 people. Rollins College gives it much stability and furnishes many cultural activities.



"Our house was built in a former orange grove and we now have 23 citrus trees and two avocados. Since coming here to live last November, we have spent much time in getting things to suit us and have now reached a point where we can play golf two or three times weekly. I am also trying to learn some of the intricacies of fishing with a spinner rod and casting. With our wealth of lakes and large mouth bass, it makes an interesting pastime.

"Former friends are frequently dropping in on their way to or from other Florida places. Some of them we met and knew in Europe during the three and a half years we lived there. The unexpected seems to happen." — BURTON G. PHILBRICK, *Secretary*, 246 Stuart Street, Boston 16, Mass.

### • 1903 •

Your Secretaries hate to have an issue of *The Review* go by without some notes of the Class. Last month we were so busy on a number of things as well as getting out letters and information about the coming reunion, that we really had no time to get the report in to the office, and this month we are receiving and answering so many letters in regard to the details of the reunion, that there will be no personal notes. We have been delighted at the response from our various letters, as the attendance at the several events will have demonstrated.

By the time you read this, the great event will be past history. We hope all of you who attended had a good time, and feel that it was time and expense well spent. We'll have a full report of all the affairs and the names of all who attended in the next issue. Meanwhile, have a good summer, go fishing, sailing, swimming, drive miles, all as you are able and desirous, is the wish of your Secretaries. See you in the fall with lots of information about those we have seen or contacted. — FREDERICK A. EUSTIS, *Secretary*, 131 State Street, Boston, Mass. JAMES A. CUSHMAN, *Assistant Secretary*, Box 103, South Wellfleet, Mass.

### • 1904 •

In April the annual class letter was sent to all on the list regardless of whether they were Review readers or not. In this letter we requested replies and especially asked that you let us know if you planned to attend the 50th Reunion in 1954 at Oyster Harbors.

We were delighted to find that 100 per cent of the replies stated that the writers hoped to attend. On the other hand only four replies have been received to date (May 20) which was disappointing. The next edition of these notes will be in November and that will mean that really active efforts must be made if our Reunion is to be a success. As we pointed out in our letter, every man who comes to the Reunion will hope to see certain members of the Class and his decision to attend will depend somewhat on who is to be there.

Everyone of you can help at this point by sending us a card before September 1 stating that you hope to attend the Reunion. A list of such names will be published in the November notes and we are sure it will be read with great interest. A good

long list would assure the success of the Reunion and the least you can do is to send in your names. This will not be a binding promise. Reply cards for definite reservations will be mailed in the spring. Just now we only want to know if you hope to attend. Be a good fellow and drop us a card.

We sent a copy of our letter to the manager of the Oyster Harbors Club and he replied as follows: "Thank you very much for sending me a copy of your letter of April 21 going out to your classmates. We are looking forward with a great deal of pleasure to having the class of '04 with us for their 50th Reunion, June 11 to 14, 1954. I will be only too happy to have you call on me for any additional help in formulating plans for your Reunion."

The presentation of the Bleininger Award to Bob Sosman for "Distinguished Achievement in the Field of Ceramics" has been previously mentioned in these notes. Bob has sent us a copy of the program of these proceedings which included a long and impressive citation too long to copy in whole here. The last paragraph was as follows: "From this wealth of energetic living, it is not surprising that many honors have been bestowed upon Dr. Sosman, not only as a scientist but as a man of great human understanding and warmth. Thus, in granting him the 1953 Bleininger Award, the Pittsburgh Section is preserving the high standard of scientific achievement and personal qualities which were possessed by the man for whom the Award is named." In the accompanying note Bob stated that he hoped to attend the 50th Reunion. We will be glad to see him and congratulate him personally on his honors.

A letter from Bill Duncan contains the following paragraph: "My Yale 50th reunion was last year and the doctor would not let me go. Maybe I will be able to go to Oyster Harbors and will if possible." Be a good boy, Bill, and do as the doctor says but we hope he says o.k. for our 50th.

The note received from Guy Palmer dated April 8 was as follows, "Just a note that the Palmers have been spending a month in Florida. We were nine days at Winter Haven and the balance of the time here. (Lee Manor Inn, Boynton Beach). Last Sunday had a visit from, and dinner with, the Currier Langs who are staying at Palm Beach about 13 miles from here. Expect to start north next Monday and arrive in Chicago on April 18. We are all looking forward to and planning to be at the big event in 1954. Wish you could see this place with about 17 acres of tropical plants, trees, birds and wonderful weather."

We wish to repeat for the nth time that the time schedule set up for getting these notes into *The Review* is such that three months may elapse between their receipt by us and their appearance on your desk in *The Review*. This delay is the fault of no one but must be recognized when you read stale items of news.

The following letter from Bernie Blum dated May 8 speaks for itself. "Your joint letter of April 21 was duly received and now that I am retired as of March 1 this year I have a little more leisure to write. We sold our house and have an apartment and just getting settled so will be able

to visit around a bit. We will plan on being at the Reunion next year. I am committed for a yacht trip out of Seattle next month. Have been in slight touch with the Institute through emissaries from Boston at the rather infrequent alumni gatherings in the Twin Cities. Through the years I have been seeing Guy Palmer from time to time serving on railway committees. After 46 years with the Northern Pacific Railway time caught up with me under the rules of the Company and no regrets. The farewell doings fully compensated for the efforts put forth through the years. Mrs. Blum and I have been fortunate throughout and no untoward circumstances arose to mar our memories. We are in good health and expect to enjoy the seventies and eighties and take them in stride. We plan to headquarter in St. Paul but as an old 'rail,' travel about is not too difficult. I look forward to seeing both of you and I hope many other classmates at the coming reunion. My best regard to each one you see."

A nice note has been received from Mrs. W. S. Anthony expressing appreciation for the flowers sent to Bill's funeral. We have just had word that George Wheat, IV, passed away, June 22, 1952, almost a year ago. No details have been received. Many who knew George will be sorry to learn of his passing. — *Acting Secretaries*: EUGENE H. RUSSELL, JR., 82 Devonshire Street, Boston 9, Mass. CARLE R. HAYWARD, Room 35-304 M.I.T., Cambridge 39, Mass.

### • 1905 •

Who says that life begins at 40, or 50 or 60? Ben E. Lindsly, III, upon retirement from the S.E.C. announces the opening of an office (909 Dupont Circle Building for the benefit of any '05 investors) as oil and gas consultant in the public and private financing of oil properties. Ben was chief of the Section of Oil and Gas for 10 years, senior petroleum engineer for six years, also senior petroleum engineer for the U. S. Bureau of Mines for 10 years. Good luck, Ben, for at least another 10 years.

Bill Spalding, although contending that previous reports as to his retirement were unfounded, admitted on April 7, 1953, that he was to be retired "on his 69th anniversary" in May. But he hopes to get out of retirement, even perhaps as rodman for Roy Allen on his school house project in New York State. Two good minors, Lindsly and Spalding, reach the majors.

If I had taken Spanish at M.I.T., I could write a story about Jack Flynn, II. I could read the signature on his check for dues, but the only news as to his doings was the enclosing of an advertising booklet, showing that he is president and general manager, and so on of "Tambores I.P.S.A.M. Industries Puerto San Martin, S. A. Comercial Industrial, Inmobiliaria y Financiera." With the help of the engineers I eat with at Thompsons Spa daily, I interpret this to mean that Jack is "rolling out the barrels." Apparently Jack on retiring from Armco felt that life in South America begins at seventyish.

The Laconia, N.H., *Independent* of February 25 carried a story of two M.I.T. men serving on the Board of Selectmen at Gilford, N. H., S. Gilbert Emilio '07 and



Arthur P. Gerry II, 1905. Arthur, having retired to Gilford several years ago has held all the important town offices, and carries on a very successful general insurance business. As a matter of fact I saw him in April, found him and his wife in excellent health and spirits, working every day, with minor farming as a sideline.

I said in my notes for the May issue that I doubted whether any secretary had ever before had a sadder task than the report of deaths in our midst in that issue. The emoluments of this office are very rewarding, but the chronicling of the departure of old friends very disheartening. Roswell Davis, XIII, died on April 19, 1953, in the Middlesex Memorial Hospital, Middletown, Conn. It is superfluous for me to tell what Ros did and was at M.I.T., how he served so efficiently as Class Secretary for nearly 14 years, what a brilliant record he left behind him at his several vocations, at Princeton, at Wesleyan, and so on. I have two letters from his wife, Helen, telling of his last illness. He had virus pneumonia in January, later complications in February, then a weakening of his heart requiring special hospitalization, oxygen tent, and so on. A week later Helen had a heart attack, was also in an oxygen tent in the room below Ros. Weeks later, so they could be nearer, both were taken to the college infirmary, where Ros passed away. At last accounts Helen was recuperating slowly. Ros went to Wesleyan University in 1925 as secretary to the trustees committee on buildings and grounds. He retired as assistant treasurer last year. Friends at the university started a fund in Ros's memory and at Helen's suggestion the objective is an oxygen tent for the Middlesex Memorial Hospital ("they did not have enough available when Ros and I were there"). In lieu of flowers which would have been sent had I known in time, an equivalent check has been forwarded. Besides his wife, Ros left a son, two daughters and seven grandchildren.

Robert C. Cutting, II, died at his home in New Orleans on April 14, 1953, after a long illness. I had seen Bob on a trip there four years ago, found him in poor health, but plugging doggedly at his job. Later an anemic condition required amputation of both feet. From 1914 to 1922 he was engaged by the government of Australia in the development of lakes and dams on the Murray River in South Australia. Returning to the U.S.A. he was associated with the U.S.A. Engineer Corps at Long Beach, Calif., and Hollywood, Fla. He also developed plans for the Long Beach harbor breakwater. In 1922 he went to New Orleans where he did important work in flood control and the development of the Mississippi outflow.

Carl E. Danforth, IV, died at his home in Bangor, Maine, on May 5, 1953. Carl had been an invalid for nearly seven years, but his wife had written recently somewhat encouragingly. He spent most of his business life in the wholesale grocery business in Bangor, retiring in 1942. He was a director of the Merchant's National Bank, a 32nd degree Mason, member of Kiwanis Club. Before his incapacitation he was an ardent class reunioner. Tom W. Osgood, III, died during

the early part of 1953 at Los Angeles, Calif. Little has been heard from Tom since leaving M.I.T. and further details are not at hand.

Harry W. Donald, III, died in his sleep on May 14 at his home in Egypt, Mass. He had appeared in excellent health even on the day of his death; had just completed a five-weeks assignment in the Boston Office of the Red Cross Drive, in fact several of us had lunched with him occasionally during that period and felt him in excellent health. He had gladly accepted the chairmanship of our Fifty-Year Gift Campaign, work on which he had delayed until the completion of the above assignment. Harry had been with the American Mutual Insurance Company for many years, but had retired to a busy civic usefulness. He leaves a widow. Mr. and Mrs. Bert Files, Mr. and Mrs. Gib Tower, Andy Fisher and I attended the funeral at St. Stephen's Episcopal Church, Cohasset, Mass. Interment was at St. John's, New Brunswick. Change of address: Capt. William A. Hall, XIII, from Atlanta, Ga., to 415½ Highland Avenue, Clearwater, Fla. — FRED W. GOLDTHWAIT, *Secretary*, 274 Franklin Street, Boston, Mass.

## • 1906 •

As mentioned in our notes in the May and June issues, Frank Benham and the Secretary made an auto trip to San Antonio, Texas, in April, leaving Arlington on April 6 and returning on the 28th. Our route included the George Washington Bridge, New York, the Jersey Turnpike to Camden, the Pennsylvania Turnpike as far as Carlisle and then over Route No. 11 to Bristol (Virginia and Tennessee), Knoxville, Memphis, Little Rock, Hot Springs, Texarkana, Dallas, Austin and San Antonio, where we arrived Sunday afternoon, April 12. Eight most pleasant days were spent in that city including trips to historical places in the city and side trips into the country. These were personally conducted by Terrell Bartlett and his good wife, Elizabeth, who made most competent guides. Trips into the country included a "Round-up," visits to oil and gas wells and a few hours shopping in the Mexican town of Piedras Negras. It was difficult to travel very far without seeing one of the many projects which Terrell had engineered and constructed as noted in the May Review. We made complete inspections of two projects, viz., the water system at Eagle Pass and the cement mill of the Longhorn Cement Company at San Antonio.

On Monday, April 20, we had luncheon with Willard E. Simpson '05, who is a brother of Guy Simpson, I, of our Class, who was an engineer in San Antonio at the time of his death in 1920. Willard is the principal owner of the W. E. Simpson Company, structural engineers in San Antonio.

We left San Antonio on April 21. Returning, we came via Houston, New Orleans, (dinner at Antoine's), Birmingham, Chattanooga, Smoky Mountain National Park, Blue Ridge Parkway, Charlottesville, Sky Line Drive and the night of the 27th was spent at a motel near the Harrisburg west connection with the Pennsylvania Turnpike. The last day we drove

476 miles and arrived home about 11 P. M., including a stop in West Simsbury, Conn., to see the Secretary's daughter and grandchildren and dinner at the Public House in Sturbridge, Mass. While in Charlottesville we called upon Mrs. E. S. Campbell, widow of our classmate who was head of the Architectural Department at the University of Virginia at the time of his death, May 8, 1950. We found Mrs. Campbell in a very attractive apartment decorated with curios collected by her husband and also with water color paintings, as our classmate was an artist as well as an architect. Campbell is survived by three sons who are married but none of them reside in Charlottesville. The whole trip was a wonderful experience and the Secretary and his companion will enjoy the recollections of it in the years to come.

Under date of April 27 a letter was received from Edgar M. Berliner of Beverly Hills, Calif., which is reproduced in full as it includes a compliment for the Secretaries: "Reading the class notes of a recent copy of *The Review*, I wondered just how long you have been Class Secretary, ditto Rowe? I have seen your names there for so long that without actually knowing it to be the case, you may have been serving since the Class graduated, or does it only seem so? In any case, I'll be happy if you would satisfy my curiosity with regard to this question. Meanwhile, I would say that you men have done a nice job all these years, and the rest of us ought to be truly grateful to you. In any event, let me say that I have always enjoyed the class notes, and thank you both for having contributed to the pleasure that I have gotten out of *The Review*." To answer Berliner's question, I would advise that in 1919 the present Secretary and Charlie Wetterer got together in his office in Boston and agreed he would be Secretary of the Class and the present Secretary would be his assistant. The following year Charles's job with Stone and Webster permanently transferred him to New York. Thereupon your scribe became Secretary and Ned Rowe was elected Assistant Secretary. Hence the answer is we have been on the job about 34 years. Incidentally, Ned has also served the Class as representative on the Alumni Council for a good many years.

Under date of April 11 a letter was received from Miss Helen L. Brown of Concord, N.H., advising of the death of her brother, our classmate Howard Hayes Brown, who passed away on March 26. Miss Brown very thoughtfully enclosed an obituary which appeared in the New York *Times* of March 27. She also included the following statement: "Of late years Howard was heavily pressed with business and the last six years with varying degrees of ill health, so that he could not keep up the contacts he enjoyed. Only very recently he wrote me how much he regretted not being able to attend the Tech dinner in New York. He did keep in close touch with the Department of Naval Architecture at the Institute and had more than one associate editor from there." Following are extracts from the notice in the New York *Times*: "Summit, N.J., March 27 — Howard Hayes Brown of 60 Blackburn Road, editor of *Marine Engineering* and *Shipping Review*, and a

director of the Simmons-Boardman Publishing Corporation, which publishes the periodical, died yesterday at the Orange Memorial Hospital, Orange, N.J. His age was 68. Mr. Brown was born in Penacook, N.H., and received a B.S. degree from the Massachusetts Institute of Technology in 1906. His first post was as editor of *The Boiler Maker*. In 1908 he was named editor of *Marine Engineering*. He had remained in the post continuously since. As the guiding spirit of his publication for 44 years, Mr. Brown covered the evolution of the steam turbine to the threshold of the era of atomic propulsion machinery. He belonged to the Society of Naval Architects and Marine Engineers, which he joined in 1908. In 1931 he was named editor of its annual publication, *Transactions*, and served for 20 years. Elected to the Society's council in 1932 he became a vice-president the following year, and honorary life vice-president in 1947. Other groups in which he held membership were the Society of Naval Engineers, the American Society of Mechanical Engineers, the Institution of Naval Architects of London (associate member), the Associated Business Paper Editors, and the Engineers and Railway Machinery Clubs. He leaves his wife, Mrs. Miriam C. Brown; a daughter, Mrs. Nancy Van Gulden; a sister, Miss Helen L. Brown of Concord, N.H., and three granddaughters."

The Secretary regrets to report the death of another classmate, Edwin Frank, II. This news was received through our classmate, Henry S. Hubbell, VIII, who is a former vice-president of the United Shoe Machinery Company in Boston, now retired and living at Skihigh Farm, Conway, N.H. Hubbell, in turn, received the news from Frank E. Hamilton, '07, a resident of Milwaukee, where Edwin Frank resided. Hubbell, in submitting the notice, stated that "I think Walter Clifford, who passed on about a year ago, and I were as closely acquainted with him as any one. We were all in the Tech Chambers the first two years it was open." Classmates will be interested in extracts from Hamilton's letter to Hubbell: "You probably remember Edwin Frank, I think he was a member of your Class along with Walter Clifford. I seldom saw him and I probably knew him as well as any one here. He, as you know, was very retiring and only last week I talked with his wife, Marie, but could not get them to come down and have dinner with me. Marie said then that Ampco Metal, Inc., were sort of nursing him along by letting him report for work at 9:30 and quit at 4:00 P.M. His study in Europe was on centrifugal pump design and Ed had told me he was designing a line of acid and special duty pumps for which Ampco metal (copper and high silicon) was well suited." Below are extracts from the notice appearing in the *Milwaukee Journal* of April 29:

"Edwin D. A. Frank, 69, a designing engineer, died Tuesday of a heart attack at his home, 1943 North Summit Avenue. Mr. Frank was born in Milwaukee. His father, Dr. Louis F. Frank, who died more than 50 years ago, was an early Milwaukee dermatologist. Dr. Frank introduced the use of the x-ray here in the treatment of malignant skin diseases and established a

national reputation. Edwin Frank was graduated in 1906 from the Massachusetts Institute of Technology, Cambridge, Mass., and did postgraduate work in Aachen, Germany. From 1915 to 1920 he was a mechanical engineering instructor at the University of Illinois. He worked for the Allis-Chalmers Manufacturing Company and the C. H. Wheeler Company, Philadelphia, Pa. During World War II he was with the o.d. Froemming Bros., Inc., Shipyard. Since 1949 he had worked for Ampco Metal, Inc., 1745 South 38th Street. Mr. Frank was a member of the American Society of Mechanical Engineers. Surviving are his wife, Marie, and three sisters, Mrs. Elsa Oesterlein, Miss Emily, and Mrs. Louise Ott, all of Milwaukee." — JAMES W. KIDDER, *Secretary*, 215 Crosby Street, Arlington 74, Mass. EDWARD B. ROWE, *Assistant Secretary*, 11 Cushing Road, Wellesley Hills 82, Mass.

## • 1907 •

On May 15 an informal dinner for our Class was held at the M.I.T. Faculty Club, which is a relatively new project located in one of the recently acquired buildings of the Institute on Memorial Drive in Cambridge. The following men were present: Bob Albro, Dick Ashenden, George Crane, Seymour Egan, Tom Gould, Harry Moody, Bob Rand, Karl Richards, Oscar Starkweather, Phil Walker, Stanley Wires and myself. After we partook of a very delicious dinner served by the staff of the Faculty Club, I told the men about recent events in the lives of some of our classmates of which I had learned, and then Horace Ford, who for many years has been an honorary member and friend of our Class and who is now a life member of the Corporation of the Institute, its treasurer emeritus, and a special adviser to its president, told us in a most interesting way of the development of the Institute since the time when we were undergraduates and especially during recent years in connection with some of the activities of the student body, the tremendous growth of the physical plant of the Institute, emphasizing especially the tremendous amount of equipment, personal effort, and money which is now being expended in connection with research, both for private corporations and for the government. One particularly striking statement that Horace made to us was that now, in any three days, the Institute spends as much money for the carrying on of its regular activities, entirely aside from special research work, as it spent in an entire year when we were undergraduates.

Some of our classmates attended 50-year reunions at various preparatory schools last May. John Frank of Chicago wrote to me in early May saying that he and Sam Marx were planning to go to Exeter Academy in New Hampshire for the 50th reunion of their class on May 30. — Through the efforts of Dick Ashenden and his wife, the Class of 1903 at Newton, Mass., High School held its 50th reunion at Brae Burn Country Club in West Newton, Mass., on May 23. Dick told me at our class dinner on May 15 that last fall he and his wife counted up 79 members of their class whose names they could recall, and they began to arrange for this 50-year reunion. Dick said that they had

had favorable replies from 60 people for this event. It is noteworthy that in that class were 12 men who are also members of our class of '07, all of whom are living. — The Class of 1903 at Hyde Park, Mass., High School also held its 50th reunion at Hotel Kenmore in Boston on May 23. This gathering is the result of the efforts of Milton MacGregor of our Class, and Milton has told me that out of 44 people who graduated in that class, 30 are known to be living, and 22 of this 30 were expected to attend this reunion. Included in this number besides Milton are Frank MacGregor '07, of Wilmington, Del., and John Bradley '07 of Waterbury, Conn. Frank MacGregor, incidentally, wrote to me on April 27 saying that he had just returned from Tryon, N.C. where he had spent a very enjoyable winter for a period of about four months.

E. Leon Chaffee, who has been on the teaching staff of Harvard University practically ever since 1907 and who has done outstanding work in the field of both theoretical and applied physics, was retired as an active professor on June 30 of this year and is now Rumford Professor of Physics Emeritus, and Gordon McKay Professor of Applied Physics Emeritus. Leon's home address is 130 Goden Street, Belmont, Mass. — During last spring as the result of the interchange of several letters in connection with contributions to the M.I.T. Alumni Fund, I had the opportunity and pleasure of becoming acquainted somewhat through letters, although not by personal contact, with Frederic G. Coburn whose name has been on our class mailing list for several years. Fred was a graduate of Annapolis and became associated with our Class during our Junior year in the Course in Naval Architecture, which at that time was known as Course XIII-A. Under date of May 12 I received from him a letter which I am now passing on to you. "I was a member of the Construction Corps of the United States Navy and graduated at Tech in 1908 with the degree M.S., but, of course, I rank with 1907. I served in various Navy yards until the first war came along, when I built and operated a naval aircraft factory for the Navy. On the termination of the war I resigned. Since then I have spent about half my time in professional work, examining industrial in connection with financing, problems of major policy, purchase and sale of corporations, receivership in bankruptcy proceedings, and the like; the other half of the time I have been engaged in working out situations that I had investigated and reported upon. Such was my engagement with Brown Company from 1942 until the end of 1949. Thereupon, having lived for 30-odd years in New York, I moved, for family reasons, to Boston. I joined Jackson and Moreland as an associate to continue professional work the rest of my days. My home address is simply Marshfield, Mass." Fred's business address is 600 Park Square Building, Boston 16, Mass. — In a letter received during May from Leverett Cutten of Allentown, Pa., who as you will no doubt remember, is an expert at silversmithing and who designed and made the cup which our Class recently presented to Clarence Howe, he told me that he plans to enter a piece of silver in a national exhibition of the work of



American craftsmen which is to be held during August of this year. Entries for this exhibition must be made and designed by one person since 1950.—A clipping from the Laconia, N.H., *Independent* of March 11, 1953, has a cut of our classmate, S. Gilbert Emilio, who had just been elected a selectman in the town of Gilford, N.H. Gilbert retired from active professional life about 10 years ago and purchased a poultry farm in Gilford, where he has been living ever since. He was a graduate in the course in mining engineering and followed that profession for many years, later returning to Salem, Mass., which was his home city, and became curator at the famous Peabody Museum in that city.

As the result of a letter which I wrote on March 8 to Max A. Greenburg, whose address is 23 Chen Boulevard, Tel Aviv, Israel, I received from him under date of April 28 a fine letter, from which I quote "Your most warm and real friendly letter had the effect of somehow suddenly spanning the years and making me feel as though the time that has passed was like a dream and we were back in our school days. Unfortunately, such thoughts do not last long, and we come to the realities. However, I want you to know how much I appreciated your letter.

"As you may know, this comparatively very small country has a great variety of landscape, from the sandy coast line along the Mediterranean to the other side bounded from the north southward by Lake Huehla, Lake Tiberias, the Jordan River, the Dead Sea, the bleak hills, to Acaba Bay, at the Red Sea. The land has numerous fertile spots, but much of the agriculture depends on irrigation. The major crop for export is citrus fruit, and the country raises most of its vegetables. The prospects of supporting the present population of a million and a half, with the expectation of a considerable increase, will have to depend on industry. The most hopeful outlook is from the minerals that are in the country, including potash from the Dead Sea, which has been sent abroad for a number of years. They have started mining phosphates further south. Copper and manganese are now being uncovered near Acaba. However, most is expected from the oil deposits, which the experts believe can solve the economic problems with which this country is now struggling. It was quite a different world here when I came some 22 years ago to manage the British Thomson-Houston Company in the Middle East, which was then part of the General Electric Company of the U.S.A. I covered the Middle East, and the work was very interesting and satisfactory, developing the business. All this has changed and has complicated matters here even more than in the rest of the world.

"To turn to the more pleasant subject of our children, our eldest son Theodor, who studied at Cambridge University, worked at British Thomson-Houston Company and was an officer in the British Navy during the World War; in fact, he was a lecturer on radar, which was then a top secret. After the war he was with the General Electric in the States. Now he is sales engineer in New York for a firm in California which supplies electronic parts for aeroplanes. He was married last year and

likes his present set-up. Our second son, who studied at the American University in Beirut, also was in the war with the American Army in this part of the world. He is with a firm here which represents various chemical companies, such as DuPont. My daughter, who studied at Boston University, entered the U. S. Army as soon as she graduated and received a commission. She was married during the war to a submarine officer who was in the Pacific. They came here during the troubles here, and he was chief of naval operations. They have two very lovely boys, one, six, and the other about two years and half, from whom Mrs. Greenburg and I derive a great deal of pleasure. Our youngest son David, who was stricken with polio in 1938, just after his 13th birthday, was in very bad shape. It was not until almost after the World War that his mother went with him to the States for the necessary operations. She stayed with him almost three years. During his treatment he started to study, entered Boston University, and graduated last year as a lawyer. He passed his bar examinations and is now a barrister-at-law. Physically he is not a giant, but there are no outward signs of the effect of the disease. At his graduation the school made a fuss over him, as part of his studying was done from recordings of lectures that were sent to him at the hospital. This method is now being used to a considerable extent with other students who are hospitalized. Now he is anxious to get connected with a suitable law firm. He lives in Boston.

"So you see life has its problems for most all of us, and it also has its compensations. We hope the future generations will live under less tensions and problems."

From a clipping from the Washington, D.C., *Post* of May 6, 1953, which was thoughtfully sent to me by our classmate, Henry Martin, I learned of the death on May 4 of Frederick W. Amadon. From 1907 to 1915 Fred was associated with the New York, New Haven and Hartford Railroad, and then he entered the service of the Interstate Commerce Commission at Washington as a civil engineer and remained there until he retired a few years ago. He is survived by his wife, Helen P. Amadon, a son, Frederick W. Amadon, Jr., and a daughter, Mrs. Ruth H. Fellows. The home address of the family is 2301 North Kentucky Street, Arlington, Va. — Through Don Robbins on May 14 I learned of the death of L. Pomeroy Russell, who was a graduate in the Course in Electrical Engineering. Pomeroy was a native of Pittsfield, Mass., and entered the Institute from Pittsfield High School. For a brief period after his graduation he was with the Central Colorado Power Company. Then he was associated in an executive capacity with the W. E. Tillotson Manufacturing Company, a concern operating knitting mills, but in 1911 he went into real estate and insurance business for himself in Pittsfield, carrying on a business which his father had built up during previous years. From 1914 to 1926 he did farming in the vicinity of Pittsfield, and then went to New York City, and from 1929 until the time of his death, he was associated with George Howe, Inc., whose office was at 527 Fifth Avenue, New York City. His home address was 1 Garrett Place, Bronxville, N.Y. His wife died during 1952, and he is survived

by a son, Bruce Russell, and a daughter Jean, who is married to an Army captain, and three grandchildren. — On May 17, 1953, Edmund H. Squire died suddenly at his home at 17 Grant Street, Needham, Mass. Ed was a graduate in the Course in Mechanical Engineering, and for three years following graduation taught that subject at the Institute. For seven years he was associated with Johns-Manville Company. In 1916 he and Charlie Allen, also of our Class, formed the Allen-Squire Company, manufacturing shoes, with their factory located in Spencer, Mass. This firm has continued to operate very successfully up to the present time. Ed was the president and general superintendent of the company. He leaves his wife, Mrs. Louis K. Squire, of Needham, and a son Raymond, who lives in Orleans, Mass.

You will be interested to know of our class performance in connection with the M.I.T. Alumni Fund of 1952-1953 as of April 30, which was the date of the latest report which I have received from Henry Kane'24, Director of the fund. At that time the amount of money which our Class had given was \$2,855, which was 122% of the amount given as of the same date in 1952. The number of contributors to this amount was 88, which is 124% of the number of contributors as of April 30, 1952. — BRYANT NICHOLS, *Secretary*, 23 Leland Road, Whitinsville, Mass. PHILIP B. WALKER, *Assistant Secretary*, 18 Summit Street, Whitinsville, Mass.

## • 1909 •

We have received 90 post card ballots and, much to the surprise of everyone, the slate of Jim Critchett, VIII, for president, Molly Scharff, XI, for vice-president, and Chet Dawes, VI, for secretary, was elected unanimously. Also, the constitution was adopted unanimously. There were a few very good suggestions for improving the constitution, and had we who drafted it known of them, they surely would have been incorporated. However, it seems impossible to incorporate them at this time without further circulation and ballot approval by the Class, and we cannot ask the Alumni Association to undertake another class mailing at this time. We have, however, attached the suggestions to our master copy now on file and they will be held for later consideration. We believe that the present draft will suffice for some time and already it has facilitated our transactions with the savings bank. We are greatly indebted to the Alumni Association which printed the president's letter and supplied the postage and the addressing facilities all without charge to the Class. Our thanks go particularly to Chick Kane'24, Director of the Alumni Fund, and to Don Severance'38, Secretary and Treasurer of the Alumni Association, for their personal interest and co-operation. The total cost to the class was only \$32.48. This, however, included a supply of class stationery sufficient for some years to come.

A fortunate result of the balloting was to bring in several communications for inclusion in these notes. Derick Hartshorn, II, has always been a generous contributor to our current class fund. His check for the Institute has already been sent to the



Assistant Treasurer, Hokansen, and credited to the Class Scholarship Fund. Derick writes: "Your letter of April 9 was a great shock to me. I had no idea that the Class had had such a multiple loss. I enclose check for the Institute and a small one for use to recoup the class funds."

"We have built a house near Ft. Myers, Fla., and expect to make our residence here but will spend the summer months at Johnsonville, N.Y. I had retired from teaching at Rensselaer Polytechnic Institute but was asked to return. I did not relish the idea, particularly as my wife wanted to spend her winters in Florida. However, she had her way as I had an attack of coronary and the doctor said I could not teach any more that year (1951). I fooled the doctors who said I could not recover and am now back in good health. Part of my time is occupied in exploring the value of some ideas I have had for some years past, and I am flirting with the idea of doing some light manufacturing. We would be more than pleased to see any of the fellows who happened to be down this way next winter. We have an extra room."

Molly, XI, writes, "Class news appears in strange places," and he encloses Art Buchwald's column in the Paris *Herald Tribune*, reprinted from the New York edition. In the column there is described a Far West French barbecue in the Bois de Boulogne held by members of the Club Hippique du Lasso, sometimes known as the Riders of the Purple Seine, a group of cowboy-loving Frenchmen who meet once a month to ride horses western style and promote the great traditions of the American cowboy in France. To quote: "The highlight of the barbecue was the presentation of a plaque by Charles Belden, a real American cowboy and a friend of the club, in the name of the Governor of Wyoming. All members of the club, according to the plaque, had been made honorary citizens of the great Equality State. This probably doesn't mean anything now, but it may mean something some day, particularly if they keep discovering oil there." This is none other than our Charlie Belden, II, the most glamorous "girl" who ever appeared in a Tech Show.

Seymour F. Barnett, I, writes as follows from California: "I certainly am grieved to learn of the deaths of three of the most prominent members of the Class of 1909, namely: Carl Gram, Paul Wiswall, and Alonzo L. (Jack) Moses, and the Class has lost three of its hardest workers. I have not been in the engineering business since I left New York in 1924. I bought a fruit ranch (apricots and prunes) here in Hollister in 1925, but because of the depression I finally sold at a loss. Also my eyes went bad and I finally had a cataract removed from my left eye."

J. N. Stephenson, X, sent us a brief note enclosing an information sheet, the N-B-P Reporter by the National Business Publication of Gardenvale, Quebec, Steve's home town. We quote: "*Pulp and Paper's* editor-in-chief, J. N. Stephenson, just can't keep his pencil off a manuscript. After finishing the fourth edition of *Pulp and Paper Manufacture*, the industry's textbook which has sold over 60,000 volumes, he has now been asked to revise

the chapter on pulp and paper in the forthcoming edition of *Encyclopaedia Britannica*. An interesting cycle of events occurs in the fact that the *Britannica* letterhead, containing the request that he undertake the work, was printed on paper made in the B. D. Rising Mills in Massachusetts, where J. N. started to work 50 years ago. His many friends throughout our organization will want to congratulate J. N. on this outstanding assignment in a reference book that has always been accepted as containing the word of highest authorities." Steve adds that Volume 3 of *Pulp and Paper Manufacture* is due next month. This all adds further to the stupendous contributions which Steve has made to the paper and pulp industry over the years, some of his achievements having been recorded from time to time in these notes.

Bob Glancy, VI, who was the hard-hitting first baseman on our '09 teams, has recently retired as general staff engineer of the Bell Telephone Company of Pennsylvania. He writes from Havertown as follows: "'Tis a long time since you and I exchanged letters. Too long to estimate. The grim reaper has surely been busy in the ranks of 1909. From that angle the contents of your letter were not welcome. The three candidates are certainly all acceptable to me and I have no difficulty in visualizing them as they looked in 1909. Except for Molly Scharff, I haven't seen any of them since 1909. I reached the end of telephone road on my 65th birthday at the end of February (should have been February 29), but I have just changed the direction of my activities from concentrating on the job (to the neglect of personal affairs) to full time on personal affairs. I hope to build a one-story home for Mrs. Glancy and myself and am concurrently trying to repair or discard innumerable gadgets laid aside until I could have a 'look see.' These activities and gardening are ample to occupy more than eight hours a day at the rate I work. I had hopes of making the 40th but a rate case made that too risky." You will recall that Bob Glancy, Jr., '37, who is with the American Telephone and Telegraph Company, joined our '09 group at the Winter Alumni Meeting.

We have received from the Alumni Office a notice of the death on June 2, 1950, of John W. Shea, VI, at Indian Orchard, Springfield, Mass. Our records have little concerning him. Apparently he was at the Institute only a short time. He came from Holyoke, Mass., and our records show that he went to Indian Orchard in 1923. Our deepest sympathy goes to his family.

This is the last number of The Review until November. The officers wish you all a most pleasant summer. The notes for the November Review will be due about September 15, so if anything of interest developed during the summer, send it to us before that date. — CHESTER L. DAWES, Secretary, Pierce Hall, Harvard University, Cambridge 38, Mass. Assistant Secretaries: MAURICE R. SCHARFF, 366 Madison Avenue, New York, N.Y.; GEORGE E. WALLIS, Wenham, Mass.

## • 1910 •

It is with extreme sorrow that I have to announce the death of Karl Fernstrom. Karl passed away suddenly on May 6.

Roy Briggs dropped in to the office recently. He has retired and is living in Quincy, Mass., and spending his time enjoying himself with occasional studies of real estate in Southbridge, Mass.

Abbott Allen retires from Stone and Webster this July and expects to spend the summer in Maine before deciding what he will do during his approaching retirement.

Cliff Hield writes as follows: "I am now a country squire, and between digging a new well, painting screens and getting them on, and hoping that tornadoes do not hit my five acres and take down my maples — my space time is well occupied. I live at Crystal Bay, Minn., on the lovely Lake of Minnetonka, famed in song and story."

Max Sherman was the subject of two articles in the Boston *Herald*, excerpts of which follow: "If you are riding this spring or summer in this section of the Granite State (Claremont, N.H.), there's a memorable picture for you at Newmont Farms, where Mr. and Mrs. M. C. Sherman have become well known as breeders of Aberdeen Angus beef cattle. It is three miles from this hustling, pleasant town. If you are lucky you will see a sizable herd of the blocky, low-slung, jet-black Angus cows with plump calves at their sides. I spent a pleasant day with the Shermans and I learned a lot about beef raising, about Angus cattle, and the opportunities for beef production here in New England. Mrs. Sherman was born on Newbury Street, Boston, and Mr. Sherman was born in New Bedford. Both their families landed in Newton, Mass., and both Max and his wife, Lillian, were graduated from Newton High School. Max received an engineering degree from the Massachusetts Institute of Technology in 1910. He worked for the American Sugar Company in Brooklyn, for Babcock and Wilcox in Cleveland, and then, after a few years, started his own engineering firm in Philadelphia. The Shermans have five children, located, as Mrs. Sherman put it, 'all over the place.' They have two farms, one down there on the State Road, and the other up here on East Green Mountain Road. They have 135 acres of tillage and 234 acres in all. It makes a good set-up for beef raising. And what we have done, others can do. There's a good future for beef in New England." — HERBERT S. CLEVERDON, Secretary, 120 Tremont Street, Boston, Mass.

## • 1911 •

Believe it or not, we are opening this last set of class notes in the current volume of The Review with a recording of two 1911 weddings, to wit and as follows: Mrs. Helen Follansbee and Mr. Walter Perkins Welch, VI, announced their marriage on April 25, 1953 at Boston, Mass. — and Miss Gurley Mae Christian and Mr. Gardner Clifford George, I, announced their marriage on May 30, 1952, at Richmond, Va. No further details available on either, the latter announcement having been sent me by Henry Martin '07, who received his S.B. with us in 1911 and lives in Washington, D.C., at 39-41 Langley Court. Henry wrote he was coming to Massachusetts on May 9 for the 50-year reunion of his Taunton High School class

of 1903. Congratulations, Walter and Gardner! — and we hope you'll bring your brides to Snow Inn June 19-21 for our informal get-together there in Harwich Port.

Had a fine note from Mrs. Donald Wright Southgate, Nashville, Tenn., expressing appreciation of our note of sympathy when Don Southgate, IV, died in February. "Don was always very interested in M.I.T. and in trying to get worthwhile local boys to go there. He would have enjoyed meeting again with the Class of 1911 at Harwich Port," she concluded.

It was my pleasure and privilege to be a headtable guest of President Carl Ell, XI, at the 10th Annual Corporation Day Luncheon of Northeastern University at the Parker House, Boston, on May 5. "He has been so faithful and friendly in including Northeastern University in the 1911 notes in the Technology Review, that I wanted you to meet him," said Carl as he introduced me to the group.

Dr. Earl P. Stevenson, President of Arthur D. Little, Inc., Cambridge chemical and engineering firm, spoke on "The Future of New England" and on the whole his talk was optimistic. He did, however, bemoan the fact that so many of the students who are trained for science and engineering in New England, leave this area when they graduate and then added: "But I am glad to be able to state that Northeastern University, which, as an urban institution, draws its student body largely from this area and with over 500 scientific and engineering graduates receiving bachelor degrees each year, it is estimated that at least 70% of its graduates remain to strengthen the industrial resources of New England."

In an official announcement, President Ell and Board Chairman Robert G. Dodge said concerning the announced closing of the Law School in 1956: "This decision was taken by the Board after consideration of long-term trends in legal education as reflected in the life of the School, current and prospective availability of opportunities for studying law in the Greater Boston Area as related to the anticipated demand, and the probable costs of maintaining in the School of Law the standards of excellence essential to its continuance as an integral part of N. U. The obligations of the School will be met in full for all present students." The School was originally started in 1898 as the first evening school of law in New England.

Carl closed the meeting with a stirring five-minute talk on new developments at N.U. and plans for the new College of Education, about to be erected. Unfortunately, I was unable to accept Carl's invitation to the cornerstone laying exercises of the new Physical Education Center on May 16.

We learn from a recent issue of The New Bedford, Mass., *Standard-Times* that Eldred E. (Cap) Besse, II, of 36 Washington Street, Fairhaven, a trustee of Millicent Library and a graduate mechanical engineer, has been elected a director and president of the Fairhaven Water Company. Continuing, the story says: "New president of the company is a graduate of M.I.T., with long and varied experience in the field of engineering. He was formerly chief of the engineering departments of

the Peters Nestlé Chocolate Company and the Hodgman Rubber Company in New York, and served nearly 15 years as chief plant engineer of the Wamsutta Mills here (New Bedford). He is now employed in the engineering department of the American Thread Company." Congratulations, Cap — and we hope to see you at Harwich Port.

Last month we told you of Class President Don Stevens, II, having talked on "Professional Ethics" to the sophomore class of Newark, N.J., College of Engineering. Now we can quote from a letter of appreciation sent Don by C. H. Stephens, Director of Industrial Relations there: "We feel that your discussion with our sophomores from a very practical standpoint becomes a method of instilling in the minds of our students the importance of the subject matter. As a result of your recent talk we are able to offer to the American Society of Engineering Education several valuable suggestions as to how this subject of 'Professional Ethics' can best be provided to engineering undergraduates." Fine, Don — also we're glad to learn that you and Lois were leaving on May 4 for the Ohio and Mississippi River trip to New Orleans. Bon voyage! See you at Snow Inn!

While crossing Copley Square, near our old haunts in Boston, in late April en route to an association meeting at the Sheraton-Plaza (former Copley-Plaza), I ran across Sellie and Daisie Seligman, III, who had just entrained at Back Bay on a train back from a winter in Florida. Now living at Hotel Astor in New York City, they were bound for Brookline to take care of some business and both looked brown as berries and said they were feeling fine too. A couple of weeks later, Fitz Fitzherbert, XI, dropped into my office in Gardner with an associate from The Home Insurance Company, Boston, of which company Fitz has for many years been secretary and a most active official. He informed me that he will be 65 in July and so reaches the retirement age — a fact he hates to have to face. He and Marjorie plan to be with us at Snow Inn.

Ottile Cushman writes from Oklahoma City that Paul, VI, was honored in mid-April by the Chicago Chapter of the American Society for Metals, along with 10 other A.S.M. members, for 25 years' continuous activity in the association — which, of course, is good news. Ottile said they weren't sure about getting to our informal get-together, but were still "hoping." At the 50th annual reception and ball of the Edison Employees Club (Boston Edison Company) our faithful Assistant Class Secretary, Jack Herlihy, II, and his wife, Mabel, were one of three couples in the reception group. They plan to be at Snow Inn, of course.

We recently received a new address from the Alumni Office for Louis Grandgent, IV, for many years in Atlanta, Ga.: Institute of Inter-American Affairs, care of American Embassy, Santiago, Chile, South America. So, of course, we immediately sent him an air mail letter asking for a "report of progress," but to date (mid-May) we have received no reply. We'll pass it along just as soon as we get it — probably in the first fall issue (November), since this is the last in the current volume.

Here it is right from the Thompson family: the following are definitely holding reservations for our informal get-together at Snow Inn, Harwich Port, June 19 to June 21: New York Metropolitan Area: Mr. and Mrs. G. Arthur Brown, X; Mr. and Mrs. James K. Campbell, I; Mr. and Mrs. Joseph F. Harrington, VI; Mr. and Mrs. Donald R. Stevens, II, and niece; Mr. and Mrs. Harry R. Tisdale, V; and Mr. and Mrs. Walter P. Welch, VI; Boston Metropolitan Area: George B. Cumings, VI; Mr. and Mrs. L. G. Fitzherbert, I; Mr. and Mrs. John A. Herlihy, II; Mr. and Mrs. M. J. Lowenberg, VI; Mr. and Mrs. Charles A. J. McManus, I; and Mr. and Mrs. O. Stewart, I; Central Massachusetts: Mr. and Mrs. Roy G. MacPherson, II, Framingham, and Mr. and Mrs. Orville B. Denison, VI, Gardner; and from Detroit, Mich.: Mr. and Mrs. Joseph N. French, IV, daughter and friend. There is a nucleus of 32 and we should have a lot more there, also — watch for the story in the November issue of class notes.

Hello, a card just received from Jim Duffy, VI, mailed from Wiesbaden, Germany: "Many people come to Wiesbaden for its baths, but it seems to me more go to the Casino here and are taken to the cleaners." Hope you're back in time for the Snow Inn party, Jim. Cap Besse, II, has just acknowledged my congratulatory letter: "It was nice to hear from you, Dennie — particularly so because I was in a Boston hospital at the time recovering from an operation. I am now home and still recuperating from the four weeks in Boston. I am not connected with the American Thread Company now, as they have closed their Fall River mill due to building a new one in North Carolina. The Water Company job is very interesting and will give me something to do — which is good for a fellow after he gets to 65, which age I reached in January."

Here's a card at hand from Don and Lois Stevens from Baton Rouge, La., saying: "We left New Orleans last night (May 13) and are now homeward bound. We have enjoyed every moment upon the rivers and in the towns along the way. Our best to all."

Also the Boston Sunday *Globe* of May 17 has a fine picture of President Carl Ell, XI, of Northeastern University laying the cornerstone for N.U.'s new Physical Education Center, referred to earlier in the notes. And so, au revoir for the summer, with two address changes to close: William Dewey Foster, IV, 2100 Massachusetts Avenue N.W., Washington 8, D.C. and Walter C. Wilson, X, 78 Cheever Circle, Andover, Mass. A happy summer to you all! — ORVILLE B. DENISON, Secretary, Chamber of Commerce, Gardner, Mass. JOHN A. HERLIHY, Assistant Secretary, 588 Riverside Avenue, Medford 55, Mass.

## • 1912 •

A card from Bolmer and Gladys Vaughan states: "After three weeks on sea and land of continuous cold, overcast, rain and torrential downpours, the elements relented the morning we left Sicily and Etna came out in all her snowcovered glory in sunrise pink, within hands' reach from our balcony. Beautiful Naples sun now, but fresh. The Italians are so pleas-



ant to deal with. On to Capri tomorrow."

Antonio S. Romero of Santurce, Puerto Rico, has sent in the following account of his activities which should prove an inspiration to other members of the Class to do likewise. "I married six years after graduation and after having worked for two years with McClintic-Marshall Construction Company, at Pottstown, Pa.; three years in the civil engineering department of the Fajardo Sugar Company, the fifth, in importance, of the sugar mills of Puerto Rico; and for one year in charge of the Sanitary Engineering Division of the Department of Health of Puerto Rico. After marrying I remained in this last position for another year, and then spent about two years in the Insular Department of the Interior, designing plain and reinforced concrete structures. From 1921 to 1942, I was head of the engineering division of the Public Service Commission of Puerto Rico. While in this last employment I took an extension law course, given by the University of Puerto Rico, and in 1938 was admitted to practice the law profession both in the Puerto Rico courts and in the U. S. Federal District Court. I was a member, or judge, of the Puerto Rico Tax Court from 1942 to July 25, 1952, when the new Commonwealth of Puerto (Estado Libre Asociado de Puerto Rico) was organized. Since then I have been a judge in the Superior Court of said Commonwealth. My engineering training has been a valuable asset in my work as a judge, specializing in tax matters, assessments, and so on. Mrs. Romero and I have two sons and a daughter. The latter is happily married and has given us a grandson and twin granddaughters, whose very light golden hair, dark eyes and sweet disposition make them very attractive. The older of our sons is a graduate of Pennsylvania University, specializing in internal medicine. He is married and has three boys. On the 13th of this month he had to report at Ramey Air Base for service as captain in the U. S. Air Force Medical Corps. Next June our younger son will finish his fourth year in the bachelor of arts course at Yale University. In September he will begin a law course, if not drafted in the U. S. Army. As he is on the 'dean's list,' he may be deferred. Who knows?" Romero is also trying to arouse enthusiasm for another M.I.T.-Puerto Rican "Fiesta" in 1954. — FREDERICK J. SHEPARD, JR., *Secretary*, 31 Chestnut Street, Boston 8, Mass.; *Assistant Secretaries*: LESTER M. WHITE, 4520 Lewiston Rd., Niagara Falls, New York; RAYMOND WILSON, 8 Ogden Avenue, Swarthmore, Pa.

## • 1913 •

With 112 persons in our 40th Reunion fold, as of May 1, 1953, the rest is clear sailing. The New York Times of April 15 showed a picture of a smiling Bob Bonney, X, with an announcement of his election as vice-president in charge of manufacturing of Congoleum-Nairn, Inc. Ken Reed, II, writes: "You asked for it! I expect to attend 1913's 40th Reunion and have just sent the word to Bill Mattson. As for myself I can report better than average health, and the arrival recently of my fifth grandchild, making three grand-

sons and two granddaughters in all. I am still operating my consulting engineering office. My practice covers industrial, mechanical, and management engineering with a good part of my time given to special machine design. I have been at it since the 1920's and at this location since 1931. On several occasions I have acted as chief engineer or works manager for clients. It has been interesting and we have never lacked variety in our work. I enjoyed our 35th Reunion in spite of the weather, and I hope we may have sunny skies and a large turnout for our 40th."

Congresswoman Rogers, of Massachusetts, calls an address printed in the Congressional Record (House) on pages 243 and 244, dated January 7, 1953, "an American story of a poor boy, an immigrant—this life could only happen in America. He was a Russian boy." Joe Cohen, X, yes, mild mannered, unassuming Joe said it: "I am happy to have this opportunity to welcome you today. As founder of Atlantic Gelatin, the history of this company represents to a great extent my own personal history and experience. Accordingly my remarks today will of necessity be of a personal nature. Many of us don't appreciate how fortunate we are to be living in America. I was born in Russia—it was Lithuania at that time but has since been absorbed by the Soviet Union. I came to this country with my parents at the age of four. Our boat docked at Boston, so quite naturally we settled in the city in what is known as the West End. I went to grade school there and took my secondary education at the English High School in Boston. . . .

"Like so many young American boys, I sold newspapers in my spare time after school in the area of North Station in Boston. After completing high school I was fortunate enough to receive a scholarship to Massachusetts Institute of Technology and each year thereafter until graduation. During summer vacations I worked to help pay additional expenses at college and to help support members of my family. One summer I worked in a tannery, and another summer as a streetcar conductor for the Boston Elevated. I also worked at the Revere Beach Bath House for the Metropolitan District Commission. One year during the course of my college career, it was necessary for me to take a leave of absence from school in order to earn enough money to continue my education. During this year from November 7, 1910, to October 1911, I worked for the Mosser Tanning Company in Peabody. I worked hard, learned quite a bit about the business and met a number of prominent businessmen in the industry. Also during this period I taught English to newly arrived immigrants at night school in Boston, and when I returned to M.I.T. in October 1911, I continued instructing in the evenings. It was there that I met the girl I was to marry, who was also an instructor at the school.

"In the spring of 1913, I was graduated from M.I.T. with a degree in chemical engineering. As I had some experience in the leather industry, it was quite natural that I should seek employment at one of the tanneries. I obtained a job with Albert Bernard and Sons in Whitefield, N.H., at a salary of \$13 a week. While there I es-

tablished a laboratory for the company, but the work was not challenging enough. I resigned and returned to Boston where I obtained a job with the American Glue Company at the salary of \$17 a week. This company was then one of the largest manufacturers of gelatin and glue in the United States and operated about 20 plants which were located all over the country. The First World War broke out at this time and the supply of ossein, derived from Europe, on which this company was dependent in part for the manufacture of gelatin, was suddenly cut off. Accordingly, I was requested to design and construct a plant to manufacture ossein. This plant was constructed in Everett, Mass., and up until a few years ago was in operation. Later the American Glue Company asked me to design and construct a fish-glue plant for them on Spectacle Island in Boston Harbor. This plant was completed in 1917.

"I worked for American Glue for six years at the conclusion of which I was earning \$5,200 a year. This was a handsome salary in 1919, but I was anxious to strike out for myself. I had heard that the tanners in this area were dissatisfied with the price they were getting for their by-products and the idea of building a gelatin plant which would use these byproducts for processing into gelatin seemed to me to be a good one. Accordingly, I approached several friends in the tanning business, principally Mr. Skilton whom I had met while working for the Mosser Tanning Company in Peabody, and had come to know most cordially in the intervening years. At this time Mr. Skilton operated one of the large tanneries in this section and thought my plan a good one but lacked adequate funds to back such a project. However, he suggested that I see his financial backer, Mr. Bullivant. I went to see Mr. Bullivant and outlined at length my plan for the new enterprise. He was impressed and not only was willing to help support the project financially, but also recommended me to other prominent tanners. On August 11, 1919, I resigned my job with the American Glue Company and between that date and September 21, I was able to enlist the support of a limited number of important tanners and we received our charter. Naturally, I wanted to have a controlling interest in the new company, but did not have sufficient personal funds to buy 51 per cent of the stock.

"As the seat of the leather industry was in Peabody and Woburn, I wanted to locate the plant as close as possible to the source of raw material. Mr. Thayer, one of the backers, and I drove over many roads in this area but could not find a suitable site for the plant. Then my good friend, Mr. Daniel O'Brien, of Woburn, located the site where we are now gathered which had the advantage of adequate water and acreage. At a board meeting, Mr. Mosher, of the Northwestern Leather Company, stated that the property was owned by the Baeder-Adamson Company in Philadelphia. We went to see Mr. Adamson and within a few hours we had negotiated a deal for the property. On October 14, 1919, ground was broken for the present factory and the first gelatin was produced in 1920. During the



first year of operation we managed to break even but, unfortunately, we had a serious depression in 1921 and the price of gelatin dropped sharply. However, by dint of hard work, we were able to weather the storm and during the ensuing years business improved. But, on the other hand, the leather industry began to decline with the result that the backers of Atlantic Gelatin were constantly after me for the money they had invested in order to maintain their leather interests.

"One of the important reasons for the rapid growth of the Atlantic Gelatin Company was the happy business and friendly relations that developed between it and the Genessee Pure Food Company, of Le-Roy, N.Y., which later became the Jell-O division of General Foods Corporation. In 1922 the Genessee Pure Food Company was pursuing a policy which necessitated having on hand constantly a large inventory of gelatin. In order to meet the expanding needs of Jell-O at that time, the company loaned Atlantic Gelatin \$100,000 to expand its plant to enlarge its productive capacity. At the same time, the Genessee Pure Food Company agreed to purchase from Atlantic Gelatin 1,000,000 pounds of gelatin a year for five years at the prevailing market price. The agreement proved to be mutually advantageous, and within three years the Atlantic Gelatin Company had liquidated its indebtedness. At the time of the loan in 1922 our production was 1,000,000 pounds a year, which increased in 1924 to 2,000,000 pounds. After the Genessee Pure Food Company became a subsidiary of General Foods Corporation, it was natural that an effort should have been made to absorb the Atlantic Gelatin Company as well. This was essential in order to eliminate the necessity of maintaining an inventory of gelatin in excess of one year's supply and to have a producing unit of adequate capacity to serve as a substitute. I was also encouraged to sell the company to General Foods by the original investors. Finally, in December 1930, the Atlantic Gelatin Company was absorbed by General Foods Corporation and since then we have been a profitable and progressive member of the General Foods family.

"It is important to mention that no individual lost money by investing in Atlantic Gelatin. Atlantic Gelatin today is the largest gelatin manufacturing company in the world. . . . Gelatin is produced from three principal raw materials — porkskins, calfskins and splits, and ossein. . . . Gelatin is used in many different ways and in many products. Of course, the largest use of gelatin is in the food industry for gelatin desserts and the largest part of our production is sold to the Jell-O division of General Foods Corporation. Gelatin is also used by the food industry in the production of jellied meats and soups. It is used in the production of ice cream, candy, marshmallow and a variety of other confectionary products. It is used in the preparation of salads and in the feeding of the sick and convalescents. It has even been used as a substitute for blood plasma in the treatment of patients suffering from loss of blood and shock.

"As you doubtless know, gelatin is used extensively in photography for it is a basic

element in the preparation of photographic film. . . . During the last war when aerial photography became so highly developed and more recently in the Korean conflict, gelatin through its application to the photographic industry, and x-ray film has been tremendously important. No doubt it was an essential element to allied victory and continues to play a vital role in saving American lives in modern warfare. Gelatin is also used extensively in many other ways. . . . The gelatin industry has succeeded because it has met numerous human needs. These needs have expanded with the passage of time, so that we have had to employ more men and more women to keep abreast of the demands being made upon us for our product. This has been a source of great personal joy to me, for it has given work to many people; it has supported homes and families; it has paid taxes to the city, the state, and the nation; and it has helped other industries to flourish in order to supply our needs. This is a worthy monument to anybody, one of which we are very proud and happy.

"Our product is sold throughout the United States and in many foreign countries, including Canada, Mexico, Germany, Japan, Italy, Israel, Spain, Belgium, France, Switzerland, the Philippine Islands, and Puerto Rico. In turn we draw on the raw materials not only of the United States of America but likewise of Europe, Asia, and South America. From small beginnings we have achieved international significance. We are a part of the greatest food organization in the world — the General Foods Corporation — and the future looks bright and assured. Our objective here at Atlantic Gelatin is to make this company a good place to work, a safe place to work, and a secure place to work."

Joseph V. Walsh, I, died on January 31, 1949, and Harry A. Norman, I, died on March 9, 1953. Address changes: Winthrop E. Caldwell, X, Sisson Casket Company, East Longmeadow, Mass.; E. Bryce Cotton, II, 1061 Beacon Street, Brookline 46, Mass.; William N. Eichorn, XI, 91 Beach Bluff Avenue, Swampscott, Mass. — FREDERICK D. MURDOCK, *Secretary*, Box 788, Pawtucket, R.I.

## • 1914 •

As your Secretary is starting off on a business trip and must prepare these notes just two weeks after the last ones were written, the news is indeed lean. Also, these notes are the last for the summer. If any Fourteen man is passing through Boston vacation-bound, it is hoped that he will give your Secretary a call or, more especially, arrange to stop over for lunch or dinner.

Your Secretary formerly thought that Don Douglas received the most publicity of any Fourteen man, but recent count put Ernest Crocker in the lead. In general, he is referred to as the man with the million-dollar nose. In April the Boston Sunday Post ran a feature article on Crocker's great technical advances in the field of smell. The article also referred to his early wireless activities.

A week ago your Secretary was in Washington and stopped into the office of

Frank Ahern in the Department of Interior Building. Yes, Frank was off on a other of his grand tours, being on the Pacific Coast at that time. It was also learned that Frank was planning to make several stops in the Southwest to inspect national monuments. It has always seemed to your Secretary that Frank certainly picked himself a good job, where, whenever he decided, he could go out and inspect the nation's national parks to see that they had not moved to another part of the country.

It seems as if each month some new name must be added to the long list of those Fourteen men who have passed on to another world. This month it is Jacob Edward Edelstein, who died on February 28. Course VI members will well remember him for his vigor and activity in the dynamo laboratory. Edelstein prepared at the North Branch, Minn., High School and attended the University of Minnesota, from which he transferred to the Institute. The class records do not give any family associations for him, and since he has been a resident of the St. Paul (Minn.) Athletic Club for the past 25 years, it is presumed that he never married. At the time of his death, he was vice-president and general manager of the Rapinwak Paper Company, with which he had been associated for more than a quarter of a century. — H. B. RICHMOND, *Secretary*, 275 Massachusetts Avenue, Cambridge 39, Mass. ROSS H. DICKSON, *Assistant Secretary*, 126 Morristown Road, Elizabeth, N.J.

## • 1916 •

The news is a little light this month, and I guess we'll have to chalk it up to an overdose of "spring fever" both on our part and also on the part of our correspondents. Well, all of us will probably have a nice vacation under our belts by the time the new series of columns begin, and it is hoped that we together will tackle the new series in the fall with renewed vigor.

For those who are keeping their address lists up to date, we have the following changes of address: Colonel William G. Brown, Box 143, Rye Beach, N.H.; Raymond G. Brown, Lewiston Heights, Mt. View Drive, Lewiston, N.Y.; Harold C. Fuller, William American Company, 215 Willow Street, Philadelphia, Pa.; Colonel Frank B. Hastie, 7107 Poplar Avenue, Takoma Park, Md.; John M. Hood, 28 Erwin Street, Coolemeec, N.C.; Ralph H. Mills, 20 Howell Road, Mountain Lakes, N.J.

We received a nice post card from Joel Connolly from Hong Kong. He mentions that there are many fascinating sights there and sends his best wishes to all the members of the Class. Irving McDaniel sends us this very interesting letter from his present location, Eniwetok Atoll: "Just received your letter re class reunion. How I wish I could attend, and I certainly will be there mentally. But, I am going to be here for a few months so that's that. For reasons of security, there is very little I can tell you. What little I can is scribbled below. I am still with Holmes and Nower. Am out at Eniwetok Atoll on some very interesting work, and that's that. However, we can write about items that don't

affect security. If you have never lived on an Atoll, you never have lived. The temperature here is maximum 84° — minimum 72°. The nights are cool to chilly and 99 per cent of the time a wonderful trade wind puts a tang and zest to life out here. There are several books describing Atoll life — *Return to Paradise* is excellent. Eniwetok is one of the nicer Atolls. Kwajalein is very sad in comparison. We have a wonderful camp on Perry Island, everything but women. From my bunk, I look out on the ocean side and see magnificent sunrises, a gorgeous rolling surf with coral white beach sands. From the other side, I see a mirror-like lagoon with a few distant islands covered with coconut trees. The lagoon side is practically one long continuous bathing beach. Every 100 feet it seems, we have exclusive beach clubs — 'The Lido,' 'The Laguna,' and so on. Scotch is \$2.00 a fifth down to Gin & Rum @ 80¢, so we have bars and night clubs, and so on. If Katharine could be with me here, I doubt if I would ever want to leave. It definitely has a charm. Living is easy — sandals, shorts and an aloha shirt. Maybe I am just a beachcomber at heart. But I wish I could drop in on you all. Remember me to everyone." This certainly is a very interesting letter and comes from a fellow who just a few short months ago had reconciled himself to retirement and puttering around with his avocados in the peace and serenity of Rancho Macajo in Covina, Calif.

A newspaper clipping in the Baltimore *Sun* reported the presence of Odie Pyle at the 40th Reunion celebration of the Class of 1913 of Polytechnic Institute. A recent news item in Lowell, Mass., *Sun* had this to say about the progress of Charlie Foote: "Charles L. Foote was elected president of the H. M. Sawyer and Son Company, Lowell and Cambridge and its coated fabric division, the Brunsene Company, Watertown, at a meeting of the board of directors. He succeeds the late Howard M. Sawyer. Mr. Foote joined the H. M. Sawyer and Son Company in 1948 as general manager; he is a director of the firm. He was formerly associated with the United-Carr Fastener Company, Cambridge." Congratulations, Charlie. Word from John Hood informs us that he is now working as a chemist for the Erwin Mills, Cooleemee, N.C. John formerly was with Textile Chemical Laboratories at the Stamford Research Laboratories of the American Cyanamid Company. Good luck to you in your new position, John. Another clipping brings us this new item about one of our classmates: "John R. Freeman, Jr., has been appointed vice-president of the metallurgy and research of the American Brass Company, according to an announcement by Arthur H. Quigley, chairman of the board. In his new position, Mr. Freeman will be responsible for all metallurgical research projects at all of the company's branches throughout the nation. Mr. Freeman, a native of Winchester, Mass., graduated from M.I.T. in 1916, following which he served for 15 years in the National Bureau of Standards, Division of Metallurgy, serving as assistant chief of the Division from 1928 to 1930. In that year he joined the technical department. In 1938 he was made technical manager of the company.

Mr. Freeman is a member of the American Society for Testing Materials, American Society of Metals, American Institute of Mining and Metallurgical Engineers, and the Institute of Metals of Great Britain. He resides in Middlebury, Conn." Congratulations, Jack.

Finally, we regret very much to report the passing of Henry Favrot early in May. Your Secretary wrote to Mrs. Favrot and expressed the sympathy of the Class.

Best wishes to all for a wonderful summer. — RALPH A. FLETCHER, *Secretary*, Post Office Box 71, West Chelmsford, Mass. HAROLD F. DODGE, *Assistant Secretary*, Bell Telephone Laboratories, 463 West Street, New York, N.Y.

## • 1917 •

DeBell and Richardson, Johnny DeBell's consulting organization in the plastics field, has sprouted a healthy offshoot — D and R Plastic Welders, Inc., has been organized to carry on an activity growing out of work for John and his associates. A recent announcement gives the following information: "... a new corporation has been formed to carry on the manufacture and sale of the D and R Hot Jet Plastic Welding Torches. This business, developed in the plastics laboratories of DeBell and Richardson, Inc., has grown to such size that it was advisable to operate it as a separate independent business. This new corporation has the name of D and R Plastic Welders, Inc., and, in addition to the manufacture and sale of the D and R Hot Jet Plastic Welding Torches, it will have facilities for the development of new products and welding techniques. These facilities will be available for the fabricating of products through the prototype stages which requires the forming and welding of plastic materials."

William D. Canan, Chief Mechanical Engineer of The Rust Engineering Co., Pittsburgh, recently retired after 28 years of service to the company. Bill is a leading authority on the design, engineering and construction of electric and steam power generating plants and stations, and for years was chief of all power projects handled by Rust. He now plans to devote his time to writing and his hobbies of stamp and coin collecting; he and Mrs. Canan will move shortly to their new country home near Boalsburg, Pa., and Pennsylvania State College.

Members of the Class of '17 will be pleased and honored to learn that Lewis W. Douglas, legislator, public administrator, business executive and former United States Ambassador to Great Britain, returned to M.I.T. in June as principal commencement speaker.

Word from Win McNeill indicates that he is retiring from General Aniline and Film Corporation. He writes: "I expect to be free to start new pursuits in the immediate future. I have decided for the present at least, to do some free lancing in the management consulting field — either to be available for assignments which the management consulting firms cannot handle with their own personnel or to perhaps work out a few of my own."

It is hoped that 1917 will be well represented at the Alumni Day ceremonies on June 15, and I look forward to seeing many of you and getting caught up on

current activities. — RAYMOND STEVENS, *Secretary*, 30 Memorial Drive, Cambridge, Mass. FREDERICK BERNARD, *Assistant Secretary*, 24 Federal Street, Boston.

## • 1918 •

By the time these notes are congealed in printer's ink our 35th Reunion will be an unalterable, happy memory; finished in wit, logic, and the transcending joy of old friendships. At this writing (mid-May) the following have declared their intention to be there (and we know of many more who will come): Nemesis Alvare, Eli Berman, Lester Conner, Yale Evelev, S. Fletcher, C. Flett, S. Franklin, A. Grossman, E. Harrall, Harry Katz, Thomas Kelley, John Kennard, Herbert Larnar, Leonard Levine, Harry LeVine, Ed Longley, A. Magoun, Ralph Mahoney, Robert Means, J. Poteat, Alan Sanger, Max Seltzer, Arthur Smith, A. Walker, Franklin Wells, Royal Wills, W. Wyer, and myself.

In an anticipatory letter to Alexander Magoun, Harry Katz says, "It seems so long ago and far away since those good old days at the Navy Yard. Oh, yes, that was the war to end all wars. Well, this is neither the time nor place to relate to you all the things on my mind. I have seen a lot, heard a lot and learned a lot and have gotten my share of the good things in life. When we get together again shortly I will tell you an amazing tale. Mrs. Katz and I are looking forward to seeing you." Ed Rossman regretfully says, "I've certainly tried to figure out a way to attend our 35th Reunion at Weekapaug Inn, but family complications interfere. I am attending a fraternity reunion in Boston on June 13, will meet my family there and give them a personally conducted tour through M.I.T. However, I'll surely hope to see you on June 15 at the Alumni Day dinner." Bill Wyer, as usual, is encountering obstacles and overcoming them, not by the simple methods of warfare, but by the exhausting arts of peace. He says, "At present I am having a difficult time arranging my schedule properly. Saturday, the 13th, is opening day at Monmouth Park, an event which is an absolute annual must in our family. This means that the best we can do is leave immediately after the races and drive to Weekapaug which will put us there late Saturday evening, too late for the banquet, but probably not too late for the cleanup of the evening's activities. On top of this, however, the Interstate Commerce has been very uncooperative in scheduling a resumption of hearings in the Long Island reorganization proceedings for Monday, the 15th, which means I shall have to pick up a Washington sleeping car somewhere Sunday evening. This apparently can be done around Providence at midnight, or in New Haven at 2:20 A.M., or in New York City at 4:00 o'clock. This is not so bad as far as I am concerned, but Mrs. Wyer has to get herself home after I leave her. However, we are planning to be there for the maximum time." Phil Dinkins reports, "I am sorry to say that after reading your enticing letters about our 35th Reunion I woke up to the fact that I have an important industry meeting that same week end which it is necessary for me to attend. I am particularly sorry that I am unable



to get to this 35th Reunion, not only because I haven't been to any so far, but this promises to be an especially good one. Please extend my best wishes to all. I still hope to make it some day."

Don MacArdle, making up for lost time with a typewriter whose mysteries he has been hot to discover at first hand, answering Alexander Magoun's April communications, says, "I'm sick of not answering your letters. I'm also sick of not ever saying hello to Gretchen, so I toss in a carbon for her. Suppose first I bring you up to date regarding my peregrinations. When I left the Gulf Oil Corporation in 1938 (having gone there from Colonial Beacon in 1933) I got into management engineering, first with the firm of Klein and Sachs (Klein, Assistant Secretary of Commerce under Hoover; Sachs of the Kuhn-Loeb family), and then to another management firm, Corrigan Osburne and Wells. In September, 1941, Uncle Sam said 'Come hither, O reserve officer,' and I was in Washington, then Columbus General Depot, then New York Port of Embarkation, then Seattle ditto, then Command and General Staff College, then England. For most of my 20 months in England I had the plush-lined job of the entire Army Transportation Officer of the City of London. I had a group with me who really knew their jobs (I was no transportation man, just a transportation corps officer, thanks to a razzle-dazzle at the New York Port when I swapped the castles for the flying man-hole cover). Back to a polka-dot bow tie in January, 1946, when I opened my own management engineering firm. It did well enough so that I could eat regularly, and occasionally have ice cream on my pie, but I developed a more and more profound dislike of being just an in-and-outer rather than a full-time member of some team. A couple of years ago I was led up the garden path on this possibility, to the further disadvantage of my management business, but last month I was really kissed. A combination of circumstances brought me in touch with Engineering Laboratories, Inc., Garland, Texas — 15 miles northeast of Dallas — and the day after their New York representative had suggested that I fly down for a look-see I found myself executive vice-president, treasurer and general manager, with a New York man as president. The company has two chief lines of activity: oil-field supplies, and Navy electronics research, a combination that of course makes no sense at all. Organizationally it's a management engineer's paradise: there is nothing that I could do that would not be an improvement. When I put on the treasurer's hat, though, it's another matter: I'm not quite certain yet where the May 5 payroll money is coming from. Either I'll retire at 65 as a millionaire, or I'll start walking back to New York before Labor Day. I don't think it will be the latter. In my spare time since 1945 I've started a very intensive study of Beethoven, have published various papers in musicological journals, have a couple of books on the fire, made Grove's *Dictionary* as a Beethoven sharp-shooter (the forthcoming new edition, I mean), and generally had a good time with it. If you've bought many records in the past couple of years you may have seen my name on the

backs of some of them: I've done jacket notes for Columbia, Decca, Vox, Victor and others. Not a chance for reunion this year — I can't even slide back to New Rochelle to get my other pair of socks. Regards to the gang and especially to you two."

It is not often that a neatly turned phrase cast upon the class notes, returns in the form of a letter from one of the brethren, either as a natural consequence or as a dire punishment. But one, in the March Review if memory serves, did stir Marvin Pierce to further perfume the literary atmosphere. After all, he works for a publishing house. Says Marvin, "For the first time in my life, my sartorial perfections have been mentioned in print. This is a tribute for which I thank you, and one at which my children, my friends, and the lovely lady pictured with me in the United States Lines advertisement will very definitely wonder. I feel no resentment at the mention of my balding — not smooth — pate, but I am offended at the prominence given Roy L. Johnson and his seven grandchildren. I have nine."

Professor Winthrop E. Nightingale, the Director of Cooperative Work at Northeastern University in Boston since March 1921, died on April 16, 1953, from a heart attack. Born February 6, 1894, Professor Nightingale was a graduate of Harvard University in 1915 with an A.B. degree; a graduate of M.I.T. in 1918 with a B.S. degree; and a graduate of Boston University in 1932 with an Ed.M. degree. On April 1, Garnett H. Porter, known to most of us as "Rip" for reasons I have never known, died at the Westfield, Mass., Sanatorium after long illness. He enlisted in the Chemical Warfare Service during World War I, and spent most of his professional life as a chemical engineer for the General Electric Company at Pittsfield. Survivors are a son, Robert H. Porter; two daughters, Mrs. Robert Harper of Pittsfield, and Mrs. W. A. Budrow of Pittsfield; and four grandchildren. He is buried in Cambridge, where he was born. — GRETCHEN PALMER, *Secretary*, The Thomas School, Rowayton, Conn.

## • 1919 •

Max Untersee finally came across with some news in a statement from Los Angeles. He visited Cambridge in the winter and saw Professor Mirabelli. We might entice Max to the coming 35-Year Reunion by stating that we will have some swimming for him this time.

Jim Strobbridge writes a few notes for The Review. Your Secretary passes him on the street occasionally. He has been president of the Strobbridge Company for a couple of years. He acknowledged and was happy to receive the 30-Year Reunion photograph and looks forward to the 1954 get-together.

Dean K. Webster, Jr., writes from Lawrence, Mass., that he and his wife were celebrating the safe return of their son, First Lieutenant Dean K. Webster, 3d, (Williams '51), from service with the Marines in Korea, also his daughter Joan's graduation from Vassar in June. Dean is taking his whole family of four for a 10-weeks' trip abroad this summer, this being the first time for Dean. They are sailing

on the *United States* on July 10, returning September 10 on the same ship.

Your Secretary ran into George Bond at the A.P.I. Convention in New York the week of May 11. He is still with Houdry. Kimberly Stuart has just moved to Gardnerville, Nev. He expects to retire from Neenah Paper Company, Neenah, Wis., at the end of this year because of health. We hope he will enjoy living in the West and will find his health improved.

Richard Holmgren, for several years assistant general manager and chief engineer of the San Diego County Water Authority, has been appointed to the top position. He went to the San Diego County Water Authority in 1945 as assistant chief engineer, and through his close association with the late Mr. Burkholder, whom he succeeds, has acquired an intimate knowledge of that important agency's operations. These included the Authority's identification with construction of the San Diego Aqueduct and, currently, the building of a second line that will double the area's supply of Colorado River water. From 1935 to 1942 Holmgren was chief engineer of the New Hampshire Water Resources Board, and during the War was engaged on Navy construction projects in Utah.

Jim Reis is still in San Marino, Calif., working for Northrop Aircraft. He expects to take a four months' leave of absence this summer and may come East. He says he would like to attend the 35-Year Reunion and renew old times. We will hope that he can make it. — EUGENE R. SMOLEY, *Secretary*, The Lummus Company, 385 Madison Avenue, New York 17, New York.

## • 1920 •

Our illustrious Class continues to generate headline news. Pete Lavedan is now president of Phi Kappa Fraternity with its 32 Chapters and 10,000 members. He is, as most of you know, chairman of the board of Liquid Carbonic Company and a member of the M.I.T. Corporation. Phil Young received a service award for completing 30 years' service with the Standard Oil Development Company where he is manager of the Patent Division. He joined the Technical Service Division of Standard Oil of New Jersey in 1922 and became a part of the Patent Group in their New York office in 1926. He has been manager of the Patent Division of the Development Company since 1935. Phil is a member of the New York Bar and of the New Jersey Patent Law Association and the National Patent Law Association. He himself is the holder of a number of patents, mostly in the hydrogenation and cracking field. Ed Cochrane, our Dean of Engineering at M.I.T., has recently been elected a director of the Babcock and Wilcox Company. Ed Burdell authored the lead article in a recent issue of the *Journal of the American Institute of Architects*, its title being, "Survey of the Architectural Profession."

The Moosup, Conn., *Journal* has the following to say about Heinie Haskell: "The village of Moosup is indebted to Henry C. Haskell for, at a time when mills all over the country, especially in New England, were closing down, liquidating and disposing of their properties, he possessed the



necessary daring and business acumen to purchase the former American Woolen Mills and set up operation of the Brunswick Worsteds Mills. His ability as a manufacturer of fine worsteds and woollens was immediately established and since the critical depression year of 1930 the Brunswick Mills have steadily grown and expanded to become one of the finest anywhere. Recently they have added a line of hand knitting yarns and colored and fancy mixed machine knitting yarns. The Brunswick Worsteds Mills are the only completely integrated Worsteds Mills in Connecticut. The plant has been expanded considerably during the past decade." Heinie is president and treasurer.

Commander Robert N. S. Baker has moved to Wynnewood, Pa. Captain Russell S. Hitchcock has moved from Bath, Maine, and may be reached care of U. S. Embassy, Hague, Netherlands.

Your Secretary had a pleasant visit with Ken Roman the other day. Ken, as many of you know, is in the textile business here in Boston. He told me that his son recently graduated from Dartmouth and was married early this spring. He has a daughter about to enter college. Ken is one of that fortunate, and I must say rather limited, segment of the Class that has changed very little since undergraduate days.

Norrie Abbott's excellent Class Letter produced a tiny but welcome response to his suggestion that you write me some news. Good old Chuck Reed came through as he always does. He writes that the Evert Freemans visited him in Cleveland last January and they had a good time talking over old times. Chuck's son, David, graduates from Yale this June and his older son, Edwin, has been with him at the Forbes Finishes Division of Pittsburgh Plate Glass Company since he completed his service in the Navy after graduating from M.I.T. in 1945. However, Edwin will shortly be transferring to the Milwaukee Paint Division of the company. Chuck wonders how many of the Class are, like himself, proud grandfathers. His son, Edwin, has a daughter two years old.

As Divisional Director of the Forbes Finishes Division, which is operating at maximum capacity, Chuck is keeping very busy. For one thing, they are designing and constructing a big new laboratory under his supervision. This spring he took a trip to the Caribbean, spending some time in the Leeward and Virgin Islands. And last summer he and his son, David, visited London, Paris and Germany. From Frankfurt they took a six-day automobile trip through southern Germany and spent some time in the Austrian mountain and lake region. Then they went to Switzerland and drove from there into Italy, finally to Nice, from where they flew back to New York via the Azores.

Chuck says he has become a confirmed Stereo Realist fan and if any of us are out his way, it would give him great pleasure to exhibit some of his 3D slides. This struck a very responsive chord with your Secretary who is also an ardent Stereo Realist fan, so the same offer goes to any of you who get to Boston. How about hearing from some of you other fellows who are camera fans or who have other hobbies that they consider equally satisfying!

Ed Farrow writes that he acquired a baby daughter, Mary Downing Farrow, born April 22, bringing the family roster to three boys and three girls. Ed believes that he may possibly hold a class record, not as to number of children but as to the span, since his oldest daughter, Betty Ruth, is 28 years older than Mary. This, of course, comes about because of the fact that fate intervened and there are two groups of children in the family. Ned and Marnie are taking the 18-year-old twin boy and girl to Europe for an automobile trip this summer. Ed says that Rochester gave Dr. Compton a fine turnout when he was there this spring.

Tony Anable reports that he has two grandchildren, both girls — Anne Barton Ogden, born April 18, 1952, and Linda Saunders Ogden, born April 10, 1953, both in Rochester, N.Y., where his son-in-law is assistant to the Treasurer of the University of Rochester. Tony, Jr., is director of promotion of the *Yankee* magazine in Dublin, N.H. Tony and Mrs. Anable are living on a post revolutionary farm 10 miles north of Stamford, Conn., on Mianus River. Tony says they are certainly glad at last to have got out of New York City. The Anables are active in community affairs and recently headed the Stamford Red Cross Fund Drive which went over its quota.

Ed Burdell has been appointed a director and member of the Executive Committee of the Research Corporation. Ernie Huntress will be director of the summer session at M.I.T. this summer. Norman Cate is now living in Arcadia, Calif.

I had an exceedingly pleasant visit with Bunt Murphy in Pittsfield, Mass., last month. Bunt runs the Berkshire Industrial School for Boys in Canaan, N.Y., which is just over the line from Pittsfield, and from all reports, he is doing a magnificent job of rehabilitating boys from broken homes. He has some 150 boys under his care. Bunt is married and has two sons. Despite all of his problems and responsibilities, he has changed very little from undergraduate days and retains his boyish enthusiasm for public service. Any of you in that vicinity would find it exceedingly interesting to look him up and see what he is doing. — HAROLD BUGBEE, *Secretary*, 7 Dartmouth Street, Winchester, Mass.

## • 1921 •

Since these notes are being prepared for a due date which is well in advance of Alumni Day, the activities of the Class of 1921 during the June trek to Tech and at our annual Class party on that occasion, will have to be deferred for recording in the following issue of the *Technology Review* in November. So that you may be certain of receiving *The Review*, won't you please verify that you have already heeded the appeals of Class Agent Ed Farrand and have sent in your annual gift to the Alumni Fund. As you know, this is the sole procedure whereby you are assured of another year's supply of *The Review*.

Harry Cole is the author of an article entitled "Approximate Elastic Spectrum of Acoustic Waves in AgCl from X-Ray Scattering," appearing in the April *Journal of Applied Physics*. A note from Captain

Elliott B. Roberts of the U. S. Coast and Geodetic Survey, gives his address as 4500 Wetherill Road, Washington 16, D.C. Raymond A. Snow is district manager of the Carolina Power and Light Company, located in Raleigh in our own home state of North Carolina. Ray is active as a trustee of Peace College and is a member of the City Planning Commission as well as of the Chamber of Commerce, Rotary, American Legion, and North Carolina Society of Engineers. A vice-president of the Boy Scout Council and board director of the Community Council and the Civic Music Association, he says he indulges in golf and book collecting for recreation. Ray and Mrs. Snow have a son and daughter. Simeon E. Travis, Jr., is chief of the airport division, Civil Aeronautics Administration, supervising Federal airport activities in the five-state area which comprises Region IV. He and Mrs. Travis make their home in Ft. Worth, Texas. Son Robert was graduated from Texas A. and M. College.

Howard B. Tuthill is vice-president and general manager of the Oliver Machinery Company, Grand Rapids, Mich., devoting most of his time to design and production. He is a director of the Old Kent Bank of Grand Rapids and president of the board of trustees of Blodgett Memorial Hospital. Howard is one of our large group of sailing enthusiasts. He and Mrs. Tuthill have two sons, a married daughter and a granddaughter. Virginia was graduated from Smith College; Victor from Northwestern; and Howard, Jr., from Williams. Eliot Underhill is a consulting engineer in San Francisco and lives on a delightful six-acre site in Los Gatos, Calif. He is a member of the American Chemical Society, the American Association for the Advancement of Science and the California Academy of Sciences. Active in Cub Scouting, he has an extensive shop for indulging in his hobby of cabinet making. The Underhills have two young sons, Richard and Michael. David P. Wheatland of Cambridge, is curator at Harvard and a trustee of Governor Dummer Academy. He and Mrs. Wheatland have four daughters and a son. Nancy was graduated from Sarah Lawrence, Barbara from Radcliffe, Susan attended Putney, Davis and Martha are at Shady Hill School.

Dugald C. Jackson, Jr., writes from his home, Rock Run Road, Box 110A, R.D. 2, Havre de Grace, Md., and says, in part: "The arrival of *The Review* reminds me that I have not given you recent news of my family. Our youngest, Daniel, a reserve officer in the Ordnance Corps, went on active duty in 1951 as a second lieutenant at Aberdeen Proving Ground, where I am located. He became a first lieutenant in 1952 and left in August for Korea. He was returned to civilian status last March and has reported back to General Electric in Schenectady, where he had finished the test course before going on duty. Betty, Dan and I spent a most enjoyable evening with Rufe Shaw, his charming wife and daughter after their recent return from a world tour. You should get Rufe to tell about his trip to the M.I.T. Club of Northern New Jersey, too! We acquired another grandchild last December, making a total of five. Dugald, 3d, and Vyole have two sons, Dugald, 4th, and Charles; David and Helen have a

daughter, Ann, and the new arrival, David; John and Elisabeth, 2d, have a son, John, Jr. Dan is still a bachelor. Betty and I will attend the June meeting of the American Society for Engineering Education at the University of Florida and will go to Yarmouth, Maine, later in the summer, where we have a cottage at Sunset Point on Casco Bay."

Jack H. Waggoner is technical assistant to the vice-president in charge of manufacturing and sales, Owens Corning Fiberglass Corporation, Toledo, Ohio. A fellow of the Society of Glass Technology of England, secretary of the glass division of the American Ceramic Society and secretary-treasurer of its Pittsburgh section, he is a member of 21 professional organizations. Jack, Jr., is a graduate of Ohio State; twins Chandler and Margaret are graduates of Ohio State and Denison, respectively. Marshall H. Winchester is supervising engineer, boiler insurance division, Travelers Insurance Company, Hartford, Conn. He is a member of the American Society of Mechanical Engineers and active on the committee for the care and maintenance of boilers. He and Mrs. Winchester have two daughters. Ann was graduated from the University of Connecticut and Lois from Hartford College. Lois is married and has a daughter. Allen Addicks is advertising representative for the timely new publication of the Sutton Publishing Company named *Electronic Equipment*. His business office is in White Plains, N.Y., and he makes his home in Jericho, N.Y. A post card from Paris and copies of daily letters, reprinted for all employees of the Rogers Corporation, are the welcome reports we have received of a highly successful second trip to Europe which Saul Silverstein made in May for the Mutual Security Agency. The reports are so revealing in their amazing details of people and places in the several countries visited that they should be collected in one volume and put on the "must" reading list for every thinking American.

It is with deep sorrow that we report the passing on January 24, 1952, in Washington, D.C., of Edgar Erskine Hume, permanent major general and director general of medical services of the United Nations Command in Korea and surgeon on the staff of the Supreme Commander for Allied Powers. Born in Frankfort, Ky., on December 26, 1889, he received degrees from Centre College, Johns Hopkins, University of Munich, University of Rome, Harvard and the Certificate of Public Health from M.I.T. in 1921. He was top man in his class on graduation from the Army Medical School. Following an early assignment to the staff of General Gorgas, Army Surgeon General, he served in World War I, receiving the Distinguished Service Medal, the Silver Star and the Purple Heart. It was while serving at Ft. Banks that he later completed the work at Technology and Harvard on his own time. He had a long and distinguished career with the Medical Corps between wars and then was assigned to General Eisenhower's staff in North Africa in World War II. The only U.S. officer to serve in Italy in both World Wars, he participated in the Salerno landing and was successively assistant chief of staff,

Fifth Army, and chief of Allied Military Government of all the large cities of Italy. For European and Korean service, he received an additional 26 decorations, including two oak leaf clusters for the Distinguished Service Medal, four oak leaf clusters for the Silver Star, four oak leaf clusters for the Purple Heart, the Legion of Merit, the Soldier's Medal, the Bronze Star with V device for valor and three oak leaf clusters, the Navy Bronze Star, the Typhus Commission Medal, the Commendation Ribbon with Metal Pendant and three oak leaf clusters, the Air Medal with two oak leaf clusters, and the Italian Cross of War Merit. Since 1925, he had been the U.S. correspondent and delegate to the International Congress of Military Medicine and had represented the United States at other international scientific meetings. He received numerous honorary degrees, including one from the Sorbonne, and was the author of some 400 books and papers on scientific and historical subjects. He was an honorary citizen of many Italian and Austrian cities. He was president general of the Society of the Cincinnati and had inducted British Prime Minister Winston Churchill into the organization shortly before his death. He was president of the Association of Military Surgeons, a fellow of the American Academy of Arts and Sciences, the American College of Surgeons, the American College of Physicians, the Royal Society of Edinburgh, the Academies of Medicine of Washington, Rome, Madrid, Rio, Lima, Mexico and Buenos Aires. He was a diplomate of the American Specialty Boards for Neurology, for Internal Medicine and for Preventive Medicine and Public Health. He was a member of Phi Beta Kappa, Sigma Xi, Alpha Omega Alpha, Delta Omega, Omicron Delta Kappa. He was a Grand Officer of the Legion of Honor, Commander of the Order of the British Empire, the Military Order of Savoy. His extensive biography has appeared in *Who's Who* since 1924. The Department of the Army has published eight pages of closely typed material covering just the citations for his military awards, which document almost unbelievable instances of extreme bravery and total disregard for danger under heavy fire, of devotion to his country, the services and humanity in general, of outstanding administrative ability and technological accomplishment. Here was a soldier, a scientist, a man.

Best wishes for a very pleasant summer. Drop a note to your Secretary and be sure to be on hand when we continue these notes in November. — CAROLE A. CLARKE, *Secretary*, Federal Telecommunication Laboratories, Inc., 500 Washington Avenue, Nutley 10, N.J.

## • 1923 •

These notes have to be written before the reunion party and Alumni Day events so a report on these will have to wait until the next issue of notes. Also, if the Class accepts the recommendations of the Nominating Committee, the new Secretary, Howard F. Russell, will write the first set of notes in the next issue of *The Review*. In concluding my services as Secretary, I again want to thank all of the members of the Class who have faithfully

responded to mailings and have contributed items for these notes. I hope you will all be as helpful to Howard.

Chan Clapp, Chairman of the Reunion Program, found himself harassed during April by strikes at the Keasbey plant of the Carborundum Company at Perth Amboy, N.J., of which he is works manager. According to the *Perth Amboy News*, some CIO production workers refused to cross the picket line established by the International Association of Machinists.

In April, Richard L. Bowditch, President of C. H. Sprague and Sons Company of Boston, was elected president of the Chamber of Commerce of the United States. His election climaxed long association with the Chamber. He had been vice-president since 1949 and had served on the executive, public relations and education committees.

E. A. Red Adams, Vice-president in Charge of Engineering of Massey-Harris Company of Racine, Wis., sent his regrets at not being able to make the Reunion this year. He says he has a daughter at Stephens College graduating this year. — John Burchard was unable to make the Reunion due to a series of academic duties. On June 11, he was scheduled to be at McGill University for a four-day conference. On Sunday, June 14, he was scheduled to get an honorary degree from Union College in Schenectady and on Monday, June 15, he was to be at Princeton for the graduation of his eldest son, John. — Alfred A. Clough is supervising construction engineer for the U. S. Interior Department at Fairbanks, Alaska. He said that June was the busy season near the Arctic Circle so he couldn't get "outside" for the Reunion this year.

Eger V. Murphree, President of the Standard Oil Development Company, was presented with the Industrial Research Institute's 1953 Medal at a dinner in his honor on April 14. The citation quoted Dr. Murphree's "skillful and inspiring leadership of an industrial group which made contributions of vital importance to our nation at war and peace and for soundness of technical judgment and broadness of horizon which served well not only his organization but his country."

Two members of the Class are in charge of summer courses at the Institute: Professor Bernard R. Proctor, one on Food Technology, and Professor Edward R. Schwarz, one on Principles of Textile Research. — The *Fall River Herald News*, in February, devoted space to specialized civil engineering courses offered at the Bradford Durfee Technical Institute. The Civil Engineering Department is under the direct supervision of Professor Frank H. Dillon, who is also chairman of the whole engineering department. — HORATIO BOND, *Secretary*, National Fire Protection Association, 60 Batterymarch Street, Boston 10, Mass. HOWARD F. RUSSELL, *Assistant Secretary*, Improved Risk Mutuals, 15 North Broadway, White Plains, N.Y.

## • 1924 •

There has already been a reunion in New York. Seems that Al Glassett<sup>20</sup> offered a reward of a bottle of Scotch for the Class with the biggest turnout at the



New York Club's golf outing in Scarsdale a few weeks ago. And the '24 representatives were the lucky winners. Barnacle Bill Simonds scrawled a hurried note from the Seamen's Club in Aruba, Netherlands Antilles. Couple of weeks later came a follow-up from Churchland, Va., with the cryptic message "Watch for the next card!" Professor C. Calor Mota sends his best regards to all of you from "this charming city of Madrid." Luis Ferre's daughter, Rosario, comes to the states this fall. She will be at Dana Hall in Wellesley. Jack Nevin's daughter, Ann, has been there this year. And from Havana still another offspring makes news this time; the exceedingly personable daughter of the Miguel Amezagaz, Hortensia. She was married in June.

*Electronics Measurements*, in an edition issued by McGraw-Hill in April, was coauthored by Frederick E. Terman, Stanford's Dean of Engineering. And we can't miss this opportunity to put in a plug for *Icebound Summer*, an Alaskan opus by Sally Carrighar, a Book-of-the-Month Club alternate for July. Illustrated by your Secretary.

Chief Engineer Lassiter (of Werner-Knapp) is currently working on a little \$60 million project in upper Michigan. He's opening up a new mine for White Pine Copper. One more promotion has come to hand, that of William C. Ridge, now works manager in charge of manufacturing operations in the Trenton and Roebling, N.J., plants of John A. Roebling Sons Corporation. James H. Bissland, nurseryman in Charlemont, Mass., and author of two books and many magazine articles, spoke to the Garden Club in Greenfield recently. His billing, "The Lanky Yankee." At a Seattle wedding in March, Mrs. Margaret Ross Hyland of San Francisco became the wife of Elden D. Pollock. Elden went from appraising to running an airport to operating a theatre. He now owns and manages the Lincoln Theatre in Mt. Vernon, Wash.

If we didn't see you at Alumni Day this year we certainly hope to do so at our 30th a year hence. In the meantime, a good summer to you all. — HENRY B. KANE, *General Secretary*, Room 1-272, M.I.T., Cambridge 39, Mass.

## • 1925 •

Ave Stanton's letter has resulted in a fair response from members of the Class both by way of news and financial support. Since this is the last class report until the fall, possibly some more of you will re-read Ave's letter during the next two or three months and take steps to drop your Secretary a line.

Arthur J. Olson, who has been with the New England Telephone and Telegraph Company with headquarters in Providence, R.I., has recently been transferred to the Boston office.

George McDaniel, Jr., who came to our 25th in his Beech Bonanza indicates that the plane is now a real work horse. He is using it to commute 300 miles to Abilene, Texas, and 650 miles to Houston, Texas, from his home base in Borger. It seems he has oil wells in all three of these locations and they keep him rather busy. He states he has two small youngsters, a girl,

four, and a boy 21 months, and confuses the issue by referring to a granddaughter, 15 months.

Charlie Cooper writes that he is still working with DuPont in Wilmington, Del., and is in charge of the Engineering Research Laboratory which employs a number of M.I.T. men from other classes. He has one married daughter and one now in college.

Commander J. J. Edgerly has been on a tour of duty as Electronics Officer and Assistant Fleet Maintenance Officer on the staff of the Commander-in-Chief of U.S. Naval Forces, Eastern Atlantic and Mediterranean, in Naples and London. He indicates that it is great to be back in the good old U.S.A. and with Mrs. Edgerly has been visiting super-markets and 5 and 10¢ stores just feasting their eyes. The Commander has just reported to the Office of Naval Research, Special Devices Center at Sands Point, Port Washington, Long Island, where he is to be naval assistant to the technical director. He is in the process of negotiating to rent a year-round cottage at Orchard Beach within five minutes drive of the laboratory. Any of you who are "hams" might try to get in touch with him over the air for he expects to have his call letters changed from W4RQO and be back on the air very shortly.

Those of you who attended the 25th will remember Hank Williams' daughter and mother both of whom were with him at the Reunion. The daughter on December 27, 1952, became the bride of Second Lieutenant Champney F. Smith, U.S.A.F. His mother, now 80 years old, who proved her agility at the Reunion, particularly in climbing through the submarine, slipped on a rug and broke her hip in January. She is confined to a wheel chair for six months but otherwise is as chipper as ever and Hank expects she will be with him at the 30th Reunion. I am sure all of us hope she makes it.

Joe Russell writes me from Houston, Texas, commenting on Ave's ability to "sling it" in masterful style. Joe has just completed his second year as president of the M.I.T. Club of South Texas and Al Goleman now takes over keeping '25 still on the map. Al is now president of the Texas Society of Architects and is very active on the Golf and Membership Committees at Pine Forest Country Club where Joe is also a member. Joe has just been asked to serve as one of the District Councilors of the A.S.T.M. A few weeks ago he ran into Don Keck at the Chicago Athletic Club. Don is still directing sales activities for Kimberly-Clark in the Central States.

Charlie Peterson writes from Lake Forest, Ill., where he has resided for the past couple of years after spending some time in the state of Washington. His daughter, Freya, who is finishing at Lake Forest High School this June, has passed the College Entrance Board Examinations and is still to determine where she goes for her college education.

Bob Read has written as follows: "Am continuing my interests in Mid-West and Williston Basin oil drilling and during the past year have, with others, undertaken in addition several extensive secondary recovery projects using both water and

air injection methods. Am happy to report that these are going extremely well — no pun intended. Interests in Denmark and Western Germany require not unpleasant annual trips to Europe. Last summer spent some time in Finland consulting on development of combined peat-petroleum fuel resources, sponsored by the Government of Finland and American bankers."

Joe McCarthy, who has been with the Graybar Electric Company since he left the Institute was appointed eastern district sales manager of that company, effective May 15. We even have some of the '25 men's secretaries providing notes now and possibly some of the other secretaries if they read these notes could keep us better informed of class activities than our modest class members. Nelson Malone's secretary at the Revere Copper and Brass in Rome, N.Y., dropped me a line to say that Nelson has been serving as vice-president of the Rome Rotary Club and effective July 1, 1953, will become president.

Don't you feel that the news which we can get into this column is better when it is provided directly by members of the Class than when we have to cull newspaper clippings for information? Why not chip in a few notes regarding your own activities?

Here are a couple of newspaper clippings which are of interest. Dr. Helen Jones, chairman of the Chemistry Department at Wellesley College has been named dean of the Class of 1956, while Morrough P. O'Brien, Dean of the College of Engineering at the University of California, has recently been named consulting engineer to the General Electric Company Gas Turbine Division, and is presently on leave from the University. — F. LEROY FOSTER, *Secretary*, Room 5-105, M.I.T., Cambridge 39, Mass.

## • 1926 •

This final issue of the season is always a problem because the outdoors is calling. As of this minute — 7:00 A.M., Sunday, May 16 — the sailboat is but partially painted, the grass had but a hurried run-over with the power lawn mower yesterday noon, the garden is not planted. However, one thing has saved the notes — it's raining so hard that even the knowledge that the flounder have arrived in the bay is of no interest. In glancing through my '26 folder I find a letter from Howard Humphrey, a fellow Du Pont who reacted to a recent story in the notes about trying to locate him while in Wilmington — without success. Howard came through with a six-page longhand letter that I at first planned to use as a numbered biography. It is so class-newsy, however, that we're going to be able to incorporate it right into the notes — here we go. "The boys have grown considerably since you saw them last. John finishes high school in June and is looking forward to college in the fall. David will start high school in the fall, while Bobby goes into first grade. Right now, John is waiting to see where he can go to college. He has applied to M.I.T., Bowdoin and Cornell. If he has a choice, he is thinking seriously of the Bowdoin — M.I.T. combined course. Within the company, here



in Wilmington, there is much said in favor of such a plan.

"Since I saw you last I have been transferred from Textile Fibers to the Employee Relations Department. Right now, I am a member of a 'task force' on a special assignment. Incidentally, we have temporary offices on the ground floor of the Nemours Building, which should make it most convenient for you to drop in on the occasion of your next Wilmington visit. Last week in Chicago, I had lunch with John Wills, John, as you may know, is a vice-president and economist of the Northern Trust Company. He told me that his older daughter finishes college in June and is looking forward to being married in the fall. His younger daughter is now a college freshman. I believe he said they go to Carlton. On another trip to Rochester, N.Y., last month, I tried to get Ward Hamilton on the telephone. He was not at home but I had a pleasant chat with his wife, Eleanor. I was certainly out of date on the Hamiltons, for I learned for the first time that they have two youngsters in their early teens. Ward is still with Ritter, also as active as ever in the Officer Reserve Corps. Don Harper's Christmas card contained the unhappy news that his wife died very suddenly in a Boston hospital in May, 1952. He is still with Westinghouse in Pittsburgh. His daughter is at Penn State, while his two younger boys are in grade school.

"I haven't seen too many '26 men around Wilmington lately. Since Engineering moved out to the Louviers Building I have missed meeting Chuck Topping '28 for lunch. Also of the Engineering Department, I have an unconfirmed report that Martin Bergen is taking a 'sabbatical' to complete studies for a doctorate. Incidentally, your record on Martin should make reference to his major avocation. He is really a scientific farmer, with a big place on Route 40 between Wilmington and Elkton. The last time I saw Marvin Smith, he told me he was in business for himself, but that was many months ago. R. A. Cunningham is with O'Toole on the ground floor of the Du Pont Building. Occasionally, I'll run into George Edmonds and have the opportunity for a few words; also Jim du Pont.

"I have missed the last two meetings of the Philadelphia Club, but am looking forward to another affair at P. S. du Pont's '33 'Longwood.' This was just tried last year as a means of getting the Wilmington and Philadelphia groups together in a convenient spot and turned out to be most successful, with a tremendous turnout of Alumni and their wives. The Class of '26 was well represented and, of course, Dick Jones was then president of the Philadelphia Club.

"While we get to New England every summer we have yet to get down to Rockport. We have been going to Lake Winnepesaukee for several years and while in New Hampshire, we see a bit of Ned Anderson '27 and his wife at Melvin Village. A couple of years ago we met Roger and Florence Smith on the main street of Wolfeboro.

"Finally, I want you to know that your New English references, particularly

those concerning the ocean, have a real nostalgic effect on me. Having been brought up on a part of the same coastline, I have memories of experiencing all of which you relate. There was nothing I liked better, as a boy, than to put on oilskins and rubber boots and to beat up and down the shore while a nor'easter was blowing. I hope I will have the opportunity to do it again some day. Best regards." That kind of letter really spoils a class secretary but it also saves the day because this column is really supposed to contain class news. You know what you get otherwise! Howard mentioned meeting the Roger Smiths — well, here's some more news about them thanks to a clipping sent us by O. B. Denison, Secretary of the Class of '11. From the Gardner, Mass., *News* — "Mr. and Mrs. Roger R. Smith of 75 Elm Street announce the engagement of their daughter, Natalie, to David Wilbur Garland of Wellesley Hills. Miss Smith is a senior at Wheelock College. Mr. Garland, a graduate of Bowdoin in 1950, will graduate from Columbia Law School in June." We met Natalie at the M.I.T. convocation four years ago and are very happy to hear this news.

In the April issue we quoted somewhat loosely from a recent article in *Life* that "Water has the second highest heat capacity of all liquids." The day the notes came out Abe White 'phoned and asked "What then, has the *highest* heat capacity?" Abe being with the Barnstead Still and Sterilizer Company apparently had a good reason for wanting to know so we called Don Severance '38, Secretary of the Alumni Association. Don being a source of wisdom himself did the obvious. He looked up the issue of *Life* we had quoted and found that the liquid referred to was ammonia. That will "learn" us and from now on we will not get technical — that's for the front part of this magazine. Speaking of technical questions — we recently wrote Art Underwood to ask some questions about the engine of a new car we had ordered. Art is head, Mechanical Development Department of General Motors Research. In his answer Art mentioned that he had been away from Detroit on every occasion that the M.I.T. Club had met recently and had not seen any of the gang.

We also had some correspondence with Gordon Spear about the car (and incidentally learned from him that we will probably not get it this year). In Gordon's letter he promised to write again and bring us up to date on the '26 men in the Detroit area. Yesterday we received a post card from New Orleans from Ben Richardson en route to Mexico where he plans to look up Carlos Arrellano and Dick Plummer. We also received a nice letter recently from Allen Cobb who is with Eastman Kodak at Rochester. Allen's letter will be made into one of our class biographies in the near future. A recent clipping tells of the arrival home of Brigadier General Ernest Warburton after 14 months in Korea where he was deputy chief of staff of the Fifth Air Force and where he was decorated by the Korean Government. While we had been aware of Ernest's military achievements we had not known

until reading this article that he had been competing for the prize given at our 25th Reunion. The heading of the news article stated "Deputy Air Chief to Spend Month with Wife, Seven Children." A photograph of this fine family proves that Ernest's achievements are not confined to the military.

As mentioned, this is the final issue of notes for the season. We will have to start whipping them together again in September so sometime between now and then we hope to hear from everyone — even a post card will be most welcome. Also remember — when you are visiting New England this summer — Pigeon Cove is but 45 miles northeast of Boston. We are there all summer and whether you come by land, sea, or air, plan to drop by. All you need to remember is that our name, in full, is in the Gloucester telephone directory. Best wishes for low golf and high fishing scores and plenty of relaxation. — GEORGE WARREN SMITH, General Secretary, E. I. du Pont de Nemours and Co., Inc., Room 1420, 140 Federal Street, Boston, Mass.

## • 1927 •

Attention wives! Every so often an item in this column is furnished by an ever-admiring wife who wants her husband's classmates to have news of him, even though he is often too modest or occupied to send the word in himself. These wifely contributions have been and will be very gratefully appreciated.

Russell N. Shiras, 676 Fairmount Avenue, Oakland, Calif., has been appointed supervisor — Development in the Chemical Engineering Department at Shell Development Company, Emeryville.

Appointment of Fordyce Coburn as district manager in charge of operations for the E and G Brooke, Claymont and Buffalo Plants of The Colorado Fuel and Iron Corporation has been announced. Dyce will continue to serve in the capacity of general plant manager of the corporation's E and G Brooke Plant, and as vice-president of Richard Ore Company. His headquarters are at Birdsboro, Pa.

Colonel William R. Frederick, Jr., writes: "I'm in Korea and enjoying the beginning of spring after a cold winter. The hills are turning green with a few splashes of color from flowering trees and a general pink cast due to a kind of Korean azalea. My job is division artillery executive officer and I have had it for almost nine months now. I arrived here on the 7th of August last year after a year in the Department of the Army in Washington, D.C. Prior to that I attended the Army War College (October, 1950 — July, 1951). My tour here should end in a few months. The next assignment is an unknown one as far as I am concerned. The 7th Infantry Division has been involved in a lot of action during the last seven months. Prior to my attendance at the Army War College I was an instructor in the Artillery School at Fort Sill for one year and for the two previous years a field artillery battalion commander there."

Frank Marcucella has been elected vice-president of the John A. Volpe Construction Company of Malden, Mass. He

has been with the Malden Construction firm since 1941 and has been its general manager for the past seven years. During his more than 25 years in the construction industry, Marcucella has engineered and supervised the construction of a number of multi-million dollar projects. He was engineer for the United Shoe Machinery Building in Boston and for the Civic Auditorium and World War I Memorial Buildings in Worcester, Mass. He served as superintendent of construction for the Cadet Armory at the U.S. Military Academy, West Point, the Southwick Memorial Building, University of Vermont, and for the John A. Volpe Construction Company's mammoth defense housing project at Bath, Maine. Samuel S. Auchincloss was recently elected president of De Walt, Inc., in Lancaster, Pa.

The 1953 annual ballot of the Alumni Association carried the names of two classmates for the National Nominating Committee as follows: "Roger W. Allen, Sales Engineer, C. B. Rogers and Associates, Atlanta, Ga. President, Atlanta Association of the M.I.T. Richard L. Cheney, West Coast Manager, Glass Container Manufacturers Institute, Inc., San Francisco, Calif. Past President, M.I.T. Club of Northern California. Chairman of Scholarship Committee. Division chairman of M.I.T. Development Program, Honorary Secretary."

Philip G. Rhoads, member of the firm of J. E. Rhoads and Sons which celebrated its 250th anniversary last year, was elected president of the American Leather Belting Association this past year, and will preside at the annual convention to be held at Skytop, Pa., in May. Besides business, Phil is very much interested in Scouting and was awarded the Silver Beaver at a recent annual meeting of the Del-Mar-Va council. — JOSEPH S. HARRIS, *General Secretary*, Shell Oil Company, 50 West 50th Street, New York 20, N.Y.

## • 1928 •

By the time this July issue of The Technology Review reaches your desk our 25th Reunion will be history.

As I write these notes I am being kept informed from Boston of the tremendous amount of work being done by Walt Smith and Herm Swartz in bringing out the Class Report, and by Bill Carlisle, Jim Donovan, and Ralph Joje and all the other members of our 25-year committee who are striving to make our 25th Reunion the biggest and the best ever.

A complete report on the 25th Reunion will be presented in the November issue of The Technology Review. It is hoped, also, that the Class Report will be ready by the Reunion. Classmates who haven't as yet ordered the Report, may do so by sending in a request with \$5.00, made payable to M.I.T. — Class of 1928 — directly to Ralph at M.I.T.

A happy summer to you — a complete report in November. — GEORGE I. CHATFIELD, *Secretary*, 49 Eton Road, Larchmont, N.Y.

## • 1929 •

Opinions and ideas for the 25th Reunion are coming in from all corners of

the country. More are needed to get a good cross section of the Class. If you haven't done so, get a note along to the Committee or Secretary so your views will be known.

Leonard Peskin, XVII, is president of Thermal Research and Engineering Corporation, Conshohocken, Pa., and I quote from a recent letter to Fish Hills, "So far as my activities for the past few years are concerned, when I left the American Steel and Wire Company in 1943, I went with Kellett Aircraft Company becoming a vice-president and seeing that company through a successful trusteeship which ended in 1949. I then started my present company which involved two years at Waltham, Mass., with Jim Donovan and the last couple of years down here." His son is a freshman in Mechanical Engineering at the Institute.

Also in Fish Hills's mail is a note from Art Marsh, "As for the years since I last visited with you in Boston, I have remained in the same line of work, sales-administrative with Interchemical Corporation Finishes Division, with headquarters in Newark, the small Company I was with having been acquired by purchase by Interchemical in 1946. I spend considerable time with aircraft accounts all over the eastern half of the country with occasional trips to the Pacific Coast. Since this work almost inevitably results in considerable government specification work, I call regularly at the government technical bureaus to co-ordinate these functions. I haven't seen many class members recently although I have seen quite a few Tech men in this area. I did see Jim Magenis a few times several years back, once in Miami and another time in the lobby of a New York hotel. He is living, I believe in Manhasset, L.I., but is skipper of a Pan-American strato cruiser to Europe. I hear of him indirectly through a mutual friend at P.A.A. and hope we will get together a year from June. I see Dan McDaniel occasionally as he works for Interchemical also but in Cleveland; I rather think he'll be back next year." (I believe Jim Magenis is now in Europe, still with Pan-American but on the ground.)

Levon Seron IV-A has been back to Boston a few times in the past couple of years. He has been trying out in local politics in Joliet, Ill., where he has an architectural office. Levon's Boston visits have been in connection with the Universalist Church of which he is a member of the National Board of Directors. — PAUL F. DONAHUE, *Secretary*, Conti and Donahue, 239 Commercial Street, Lynn, Mass. FISHER HILLS, *Assistant Secretary*, Dewey and Almy Chemical Company, Cambridge, Mass.

## • 1930 •

Fred Nordsiek contributed a section entitled "Research" to the annual report of the American Cancer Society for 1952. Robert Beyer of Concord, N.H., has been active in local politics, serving as president of the Concord Taxpayers Association and as a candidate for the school board in the recent election. Bob is assistant treasurer of the Loan and Trust Savings Bank in Concord. Two Course IV men were in the news recently: Sam

Zisman of San Antonio as speaker at the February dinner meeting of the American Institute of Architects in Dallas; and Elroy Webber of New York City and Springfield, Mass., a member of the architectural firm of Green and Webber which is designing an elementary school in the latter city. Before attending Tech Night at the Pops in Boston recently your Secretary and his wife had dinner with the Allen Lathams and three of their four children. Nichols is a junior at Roxbury Latin School, Harriet is completing her sophomore year at Girls' Latin in Boston, while David and Tom are 13 and 10 years old respectively.

From Fullerton, Calif., comes word that Lieutenant Commander Carlton Moore, U.S.N. (Ret.), passed away last December following a coronary thrombosis. In January Henry Dick of Bloomfield, N.J., died. He had been a staff member at the laboratories of U.S. Rubber Company in Passaic. Dr. Louis Goldman died in March. He was supervising chemist for the Bureau of Mines in College Park, Md., and was well known in the field of boiler feed water treatment. To our classmates' families we extend deep and sincere sympathy.

We conclude this volume of The Review with our best wishes for a pleasant summer and fall. In two short years our 25-Year Reunion will be history, so we hope you all are planning (and saving) so that you and your families will be included in its celebration. Your ideas and suggestions for the Reunion, as well as personal letters about your recent doings will do much to keep this column active and interesting to your classmates. — PARKER H. STARRATT, *Secretary*, 1 Bradley Park Drive, Hingham, Mass. *Assistant Secretaries*: ROBERT M. NELSON, 2446 Iroquois Road, Wilmette, Ill.; ROBERT A. POISSON, 150 East 73d Street, New York 21, N.Y.

## • 1932 •

We have had a fine letter from Rolf Eliassen, our Assistant Secretary, with some interesting news on some of our classmates. Rolf says that far too few of our Class pass through the halls of M.I.T. nowadays. He is, as you know, Professor of Sanitary Engineering, holding forth at Room 1-138. He reports: "My own activities at Tech keep me very busy. Our Sedgwick Laboratories of Sanitary Science are going full blast on research in the field of the treatment of water, sewage, and industrial wastes. We have a large research project for the Atomic Energy Commission involving studies on the decontamination of water. We have about 25 graduate students working toward their master's and doctor's degrees in Sanitary Engineering. These men come from all parts of the country and are helping us to build a record of worthwhile contributions to sanitary engineering research and development. I have been fortunate in having been appointed a member of the National Advisory Health Council which is the top civilian advisory board to the Surgeon General of the U.S. Public Health Service. Activities of this Council take me around the country quite a bit as we study the research problems and facilities of many institutions



engaged in research in the field of public health. I hope to run across some of our classmates on these journeys."

Rolf reports he sees a good deal of Henry Mitchell, who is a faithful participant in the activities of the Alumni Council. Henry is now doing his first real work in civil engineering since he got out of Course I 20 years ago, as Water Commissioner of the town of Amherst, N.H. Henry deserted the ranks of engineers by attending the Harvard Business School and then getting into industry. He is now vice-president of Improved Paper Machinery Inc. He has been very busy in the manufacture of paper machinery for some of the large new mills in the South. It was a most fortunate coincidence that one of these paper mills in Florida started operation in February. That enforced trip to Florida must have been hard to take when snow was deep and winds were cold in New Hampshire.

Rolf has also run across Willard Whittemore of Course I. Bill is very active in the Engineer Corps Reserves as lieutenant colonel in command of Topographic Battalion. For the past 17 years Bill has been teaching mathematics in the high school at Everett, Mass. He seems to be thriving on the combination of academic and military work.

A note from Frank Chaplin tells of some of the doings of our Philadelphia classmates: "Ad Ellis was elected to the executive committee of our Philadelphia M.I.T. Club. He seems to be doing well at Smith, Kline and French (March notes). He recently moved to an impressive looking castle in Chestnut Hill about one mile from me. Ten days ago I attended a bachelor party for a Budd Company man. While there I ran into Johnny Lyon. He is still at Budd and looking very well. Walter Guzewicz was also there. I don't think there has ever been a line in our notes about this colorful boy from Taunton. After getting out, Walter worked at the Budd Company until sometime in the war. Then he quit to help Piasecki launch his helicopter company. About the end of the war he struck out for himself in a venture called Stainless, Inc., at North Wales. Here he manufactures radio and TV towers. A few years ago he married his secretary and they now brag about a daughter. Yours for bigger and better notes."

If anyone needs "Fittings that Fit!" get in touch with John Navas, Box 228, South Pasadena, Calif. John started this enterprising activity in 1947 and gave it a shot in the arm with a profit-sharing plan a couple of years later and seems to be up to his ears in orders. His letterhead depicts 16 adroit affairs, including an "industrial drop rod guide and latch assembly," which is far beyond the imagination of this chemical engineer. John married Lyda Applegate in 1940 and they have two boys, Johnny, 2d, nine, and Jimmy, six.

Another John, Northup, has made news by promotion to Director of Engineering for Owens-Illinois Glass Company. John joined Owens in 1933, managed two of its glass container plants and for the past five years has supervised corrugated manufacturing operations. As Director of Engineering, he will be re-

sponsible for construction of new company facilities and major revisions to old ones. He will also co-ordinate the development and engineering work of the divisions and the subsidiary. Knowing Owens-Illinois as I do, I can assure you this is a full plate. John lives with his wife and three children at 2344 Middlesex Drive, Toledo 6, and is president of the M.I.T. Club of Toledo.

We had a nice note from Robert Moore with a contribution to the Alumni Fund. He is living in Winston-Salem, N.C., and is assistant superintendent of engineering for Western Electric Company. He married Myrtle Hughes in 1934 and boasts a son, Arthur Hughes Moore, eight years. Bob went to Armour Institute for his graduate work and besides some church and school activities, gardening and golf, he reports little time for much else than his assignment of supervising the 75 engineers reporting directly to him.

Another blast from P. T. Boothby for having the 25th Reunion around Boston and making less fuss about golf and other exclusive affairs. Good thinking, and we will be asking for more individual ideas as the fatal time approaches. I have seen Raymond Schaefer '33 more than most. Ray is vice-president of Research and Development for the impressive American Brake Shoe Company. He lives with his wife and four children at 248 Richards Road, Ridgewood, N.J. Ray didn't finish with us at Tech, but takes a genuine interest in the Institute and in our Class. He was at the 20th Reunion and is a regular supporter of the Alumni Association.

A note from Alan MacDonnell tells that Dick Cochrane is also with the Gilbert and Barker Manufacturing Company, in charge of oil heating equipment research section. He has been with them about the same time as Alan, who as I reported last month, is general sales manager. Dick lives in West Springfield with his wife and boy.

Myron Burr has formally apologized for missing Alumni Day last year, with a bona fide excuse that he was en route to Montevallo, Ala., where his daughter, Barbara Ann, was finishing her junior college work at Alabama College. Myron's first son, Myron Whitney, is a freshman at Rutgers and his second son, Donald Calvin, is age 12. Living in South Windsor, Conn., he is inspector of electric machinery for Hartford Steam Boiler Inspection and Insurance Company. On professional accomplishments he notes: "O Come Now. Having worked my way through M.I.T. I have been polishing off the ensuing years by working my way through the engineering profession. Such parttime activities have given me a better living standard if not a better way of life than many of my professional superiors." I can see what he means as he lists for extra curricular interests: choir director, First Congregational Church, master of Evergreen Lodge F and A M, assessor, 1946 to 1950, orchardist, title abstractor, real estate brokerage.

I am only about half way through my current material now, but I think this is enough for one issue. At least I have got a good start for fall and I hope the mail continues to be interesting. Best wishes

for a fine summer. Get back to the Tech Review habit in the fall. — ROBERT B. SEMPLE, Secretary, Box 111, Wyandotte, Mich. Assistant Secretaries: WILLIAM H. BARKER, 45 Meredith Drive, Cranston, R.I.; ROLF ELIASSEN, Room 1-138, M.I.T., Cambridge 39, Mass.

## • 1935 •

Receipt of The Review for May prompts me to say a few words in behalf of the Class of 1935. Two decades less two years ago some 500 slide rule artists left a factory of learning on the Charles. Intentions were the best to preserve friendships of four years' standing. A few perhaps can lay just claim to abiding by their resolutions. All too many have allowed the bonds of campus and classroom association to lapse. Your Secretary is not an exception. With this wistful preamble, let's examine the records. What records there are have all appeared previously in print (delinquent letter writers take note) but here goes. . . .

Paul Cohen, who will be remembered for his literary and editing prowess on *The Tech* and subsequently on *The Review*, continues to write for publication. Recent results were the lead article in the *Sperry Engineering News*, entitled, "The Automobile Torpedo." Paul is a busy man these days, for in addition to his writing, he does a fair amount of work for Sperry Gyroscope Company. In addition, he is taking evening courses in advanced mathematics and dynamics which, we gather, may be pointed toward a graduate degree. This busy program doesn't leave Paul much time for home life with his wife and two children.

The Technology Review continues to appear each month of the school year under the editorship of another member of our Class, whose interests likewise extend into the writing and engineering fields. Dudley has recently been elected chairman of the Boston Section, Institute of Radio Engineers, and represents the Optical Society of America on the Committee on Sensitometry of the American Standards Association. A new research laboratory of the Cabot Carbon Company, which has recently been opened on "research row," makes Randolph Antonsen a neighbor of M.I.T. Randy enjoys the splendid new research facilities; he is also an active member of the M.I.T. Alumni Council. Luke Packard, President of Technology Instrument Corporation in Acton, Mass., and Jack Colby, of Johnson Service in Boston, both report business is good. Both were interested in expanding their technical personnel by taking on some of this year's graduating class. Last reports, however, indicated that there were not enough M.I.T. engineers, by far, to fill the jobs which are now available.

Bud Taft has put his chemical engineering schooling to good use with Du Pont ever since graduation. His assignments have included explosives chemist, explosives production supervisor and assistant manager for photo products manufacture. Bud is now branching into sales as assistant manager of the Chicago office for the Du Pont Photo Products Department. The remaining news clips available concern chaps who were affiliated with '35 as graduates or who spent only a few



years at Technology. The first concerns Everett W. English. On completing his studies in Europe, Everett studied Ship Operation at the Institute and has worked for the French Line and the Pennsylvania Railroad. Since 1946 he has been associated with the "Ask Mr. Foster Travel Service." Late last year he was appointed traffic manager for the firm.

James E. Castle, who preceded his M.I.T. graduate work at the Colorado School of Mines, has recently joined the Foote Mineral Company as manager for the Lithium Mining and Milling Division at Kings Mountain, N.C. University of Oregon graduate, Harlow E. Hudson, has recently been appointed assistant director of planning for the City of Portland. Mr. Harlow took graduate work in architecture at the Institute, studied in Europe, was associated with the Federal Housing Program and until recently has been an instructor at the University of Oregon. Chester A. Siver, U.S. Naval Academy '34 and graduate student at M.I.T. and Harvard, was appointed general manager of engineering by Black, Sivalls and Bryson, Inc., Kansas City, this spring. Black, Sivalls and Bryson are manufacturers of oil and gas field equipment with operations in Kansas City, Oklahoma City and Tulsa. Chet Siver has had positions with American Machine and Foundry, Linde Air Products and the Liquid Carbonic Corporation.

Benjamin F. Schlimme, University of Pennsylvania, '34, studied for his master's in Chemical Engineering at the Institute and joined the Du Pont Company in 1935. Last fall Ben was made production manager for the Grasselli Chemicals Department. Alvin Sloane, another graduate student associated with our Class, has recently had a book published, entitled, *Mechanics of Materials*. Alvin is an associate professor of Mechanical Engineering at the Institute. Early this year another graduate student affiliated with our Class, Robert G. Pierce, was one of several men who have organized a wrapping paper wholesale firm in Greenfield, Mass. The firm is Richard D. Smith, Inc. Bob Pierce worked for Ernst and Ernst, accountants and engineers for 12 years after graduation. An article in a Baltimore paper from a Paris correspondent speaks highly of the engineering for the Republic of Liberia that Joseph F. Walker has carried out as Chief Engineer, Department of Public Works. Joseph graduated from Tufts in 1933 and earned his master's in Civil Engineering in 1935.

Our last newsclip from a Worcester paper reports Arthur Lariviere's appointment to the Board of Appeals. Arthur is in the real estate business and president of the Worcester Home Owners Association. In my capacity as president of the M.I.T. Club of Fairfield County, I was a master of ceremonies at a meeting of 50 odd local Alumni in April. We were fortunate to have Dean E. Pennell Brooks '17 as speaker to explain the workings and objectives of the School of Industrial Management. — J. BARTON CHAPMAN, *Secretary*, 7 Lalley Boulevard, Fairfield, Conn.

### • 1937 •

We have another letter from Jerry Salny's mailing. This time from Havana,

Cuba, from Pedro J. Mari who is now with the Cuban Telephone Company. "During November and December last year I was away from Havana on a special assignment and then the amount of work has kept me from answering your notes. Right after I left Tech, I lived among cowboys for almost two years, working for the Southwestern Associated Telephone Company near Houston. In '39 I came back to Cuba and have been working for the Cuban Telephone Company ever since. If you ever come down to Havana, I would be very pleased to see you and show you this town — all of it!

"You are right. I'm married, but wrong about children; instead of 16 there are none. Very seldom I get up to your latitude — too far for a month's vacation. If I ever get over to New York, I shall call on you. I never forget the good times we had at M.I.T. and New York. Are you as fat as in '37? Well, I shouldn't talk about that myself. . . . Give my best regards to your Mother and wife and remember I'm here although I don't write too much — so don't forget."

Charles A. Blessing is Detroit's new city planner and as he quotes "My chief interest is in rebuilding and Detroit is assuming national leadership in that field. Detroit offers me the best opportunity for this in the entire country." Charles served in the military government branch of the Navy from '43 to '46, going directly to Boston as director of the Greater Boston Development Committee, thence to Chicago in '48 as city planner. He and his wife, Elizabeth, have two sons, Bayard, 7, and Curtis, twenty months.

Dr. Leon P. Tarasov of the Norton Company gave three lectures during March before the Society of Tool Engineers as part of the '53 educational program free to all members. Wayne M. Pierce, Jr., who was manager of recreations at Norden Instruments, Inc., was appointed vice-president in charge of manufacturing during March. He was also elected a director of the company. Prior to this he held positions in the engineering department of Chance Vought Aircraft until '45 at which time he went with the Tey Manufacturing Corporation of Milford. Wayne is in charge of the operations at the two precision instrument facilities of Norden in Milford which employs approximately 740 persons.

Winthrop Delano Comley of Hartford, Conn., flew to Paris during March to take up an assignment as a chemical engineer for the Lummus Company, New York engineering and construction firm for the petroleum and chemical industry. He will be adviser and consultant to the French petroleum industry and will be required to do a great deal of traveling. Win took his wife, the former June Bowes of Baltimore, and two children, Marcia, six, and Kevin, three. Edward Mosehauer is chief design engineer of the Hamilton Standard Division of United Aircraft Corporation at Windsor Locks, Conn. Albrecht E. Reinhardt is project engineer with the same company.

Robert C. Glancy, Jr., spoke before the New England Radio Engineering Meeting during April on "TD-2 Microwave

Radio Relay Systems." Frank J. Mather, 3d, wrote to The Review that he was married at West Falmouth, Mass., on September 28, 1951, to Willia V. Harlow of Falmouth.

See you all in the fall in this column, we hope, if folks will only drop me a line. How about an occasional postal card from your vacation spots? — WINTHROP A. JOHNS, *Secretary*, 34 Mali Drive, North Plainfield, N.J.

### • 1940 •

Your Secretary reports with regret the death of Paul T. Nims, a Course VI graduate student with us. James Fifield who is now a metallurgist with the International Nickel Company, of New York City, gave a lecture on cast iron before the Worcester Chapter of the American Society for Metals in March. Tom Gibb gave the final lecture in the Tufts College lecture series this spring. His subject was "The Relation Between Modern Scientific Research and Science Fiction." Tom is director of Sponsored Research at Tufts.

Dick Spalding has been named coordinator of corrugated operations for Owens-Illinois Glass Company in Toledo, Ohio. Previously he was chief packaging engineer with Owens-Illinois. John Pellam has been appointed to the staff of the National Bureau of Standards where he will be concerned with research in the Cryogenics Laboratory. Previously John was on the staff of the Research Laboratory of Electronics at Tech. Sam Goldblith is coauthor with Bernard E. Proctor '23 of "Evaluation of Food Sterilization Efficiency" which appeared in the September, 1952 issue of *Nucleonics*.

I received a short note from Peggy and Jay Dienes. Peggy is now working for the John Powell Laboratories in Port Jefferson, N.Y. The company is in the insecticide field. Jay continues to work for the Brookhaven National Laboratories. They are both thriving on country life, enlivened by periodic trips to New York City and Boston. Edith (Cameron) and Ed Kingsbury mailed your Secretary a check for \$5.00 for class dues. This is the first time that dues have been received from a husband and wife both of whom are members of the Class. Unfortunately, no letter accompanied the check so there is no news from the Kingsburys other than that they are residing in Keene, N.H. That winds up another '40 column until next fall. Don't forget to write Al a line or two this summer so the Class will start the new volume of The Review with a bang. — ALVIN GUTTAC, *General Secretary*, 7814 Marion Lane, Bethesda 14, Md. MARSHALL D. McCUEN, *Assistant Secretary*, Oldsmobile Division, General Motors Corporation, Lansing 21, Mich.

### • 1941 •

A card from Norton Polivnick announces the opening of an office for the practice of architecture, on March 1, 1953, at 1225 Bannock Street, Denver, Phone Acoma 8516. The best of luck to you in your new business, Norton.

New addresses: Herman Bartholomay, Jr., 1174 Tower Road, Winnetka, Ill.; Gilbert I. Clark, 55 Cheyenne Drive,

RD 5, Crafton, Pa.; Charles Burdette Cole, Reinhold Publishing Company, 111 West Washington Street, Chicago, Ill.; Charles Burt Cole, RD 2, Wallowa, Ore.; Mrs. H. L. Guttman (née Janet Bol-lum), RD 1, Ojai, Calif.; John W. Horner, 8935 Valley View Avenue, Whittier, Calif.; Erling H. Hustvedt, 184 West 37th Avenue, San Mateo, Calif.; or Bechtel Corporation, 250 Sansome Street, San Francisco, Calif.; Vitaut F. Janul, 41 Stratford Road, Baldwin, N.Y.; Robert T. Luedeman, 217 Rose Street, Metuchen, N.J.; Robert J. Meier, 272 Cloverly Road, Grosse Pointe Farms 36, Mich.; Colonel Lewis L. Mundell, 3201 North Wakefield Street, Arlington, Va.; Professor Morris Neiburger, 1630 Bentley Avenue, Los Angeles 25, Calif.; Lieutenant Colonel Conrad N. Nelson, HQ USAF, AFDAP, Washington 25, D.C.; Dr. Jake T. Nolen, 228 Reist Street, Williamsville, N.Y.; Charles K. Shoyes, Inland Steel Company, East Chicago, Ind.; Guy W. Slaughter, Box 402, Aiea, Oahu, T.H.; Lieutenant Colonel John E. Stadig, 625½ Park Avenue, South Pasadena 9, Calif.; Richard B. Stambaugh, Box 5191, Fairlawn Station, Akron 13, Ohio; Rea W. Stan-house, 1053 Eugene Drive, Schenec-tady, N.Y.; Clarence E. Stevens, Jr., 91 Overlook Drive, Greenwich, Conn.; Car-lton M. Stewart, Apt. 12D, 240 Mt. Ver-non Place, Newark, N.J.; Ralph C. Swann, 410D Wherry Housing, Hunts-ville, Ala.; Richard W. Tindal, Shepard Hills, Sturbridge, Mass.; Henry C. Wal-ter, 1206 North Rodney Street, Wilming-ton, Del.; Gifford E. White, 1505 Forest Trail, Austin 3, Texas; Victor M. Wolf, 20 East 76th Street, New York, N.Y.

This closes out another volume of The Review, for the summer. To those of you who have written me, thanks again; to those who haven't, how about a note to help start off the new series in the fall? Even a post card from your vacation hideout would be very welcome. A pleas-ant summer to you all, and we'll get to-gether via this column again in the fall. — IVOR W. COLLINS, *Secretary*, 28 Sherman Road, Greenwood, Mass. JOHAN M. AN-DERSEN, *Assistant Secretary*, Saddle Hill Farm, Hopkinton, Mass.

#### • 1942 •

It looks like spring has finally come to Boston now that May is here. With vaca-tions soon to be upon us, the mail and clipping service have slowed down and all is quiet except for the ever welcome flow of class dues. The receipts to date give promise of a very fine class booklet. The more contributors, however, from amongst the folks who have not yet sent in their two dollars the bigger and better it will be.

The news spotlight this month shines on the Albert Clears. Jerrie and Bert have announced the arrival of Gregory Stuart (lead-off candidate for the special prize announced at our 10th Reunion last June). Ken Rosett writes that the old homestead in Tuckahoe is all repainted, redecorated, the playroom is half fin-ished, the doors are on the dark room, and the booze is on the bar.

It is always a pleasure to have some-one write that he feels the class dues is

one of the few bargains left in the U.S. economy along with Life Savers at five cents and the *Wall Street Journal* at 15 cents. Ken and Jean apparently had a wonderful time in Europe with the Air Force, but are bound and determined to stay put for a while in Westchester.

Just for the record, the financial report for the year is as follows: Cash on hand October, 1952 — \$37.13; Receipts — \$296.31; Disbursements — \$39.50; Cash on hand May 19, 1953 — \$293.94.

Congratulations are in order for Harry Maynard who is now Captain Harry Maynard, U.S. Navy, and for John Davi-son who is now Dr. John Davison. The biggest move of the month was made by Albert Downing from Winchester, Mass., to Dhalran, Saudi Arabia. Other changes in addresses are: William Cassidy, Jr., to San Rafael, Calif.; Thomas Crowley to Chicago, Ill.; Dr. John Davison to Grand Forks, N. D.; Richard Hammerstrom to Atlanta, Ga.; Ernest M. Kenyon, Jr., to Alexandria, Va.; Lieutenant Commander Donald Kern to Portsmouth, N.H.; Wil-liam Seaton to Hollis, Long Island, N.Y.; Donald Stein to Great Kills, N.Y.; Louis Stouse, Jr., to Greensboro, N.C.; Mark Sturtevant to Detroit, Mich.; Ralph Vac-caro to Woods Hole, Mass.; Howard Ware, Jr., to Greenwich, Conn.; Glen Whitham to Quincy, Mass. Best wishes for a pleasant (not-too-warm) summer. — LOUIS ROSENBLUM, *Secretary*, Polaroid Corporation, 730 Main Street, Cambridge 39, Mass.

#### • 1943 •

As these notes will reach you on some sunny July day, long after our 10th Re-union has gone on record, I should like to take this opportunity in advance to express the thanks of all to the Reunion Committee nucleus for their devoted work in making the affair a success. To Chairman Jim Hoey, Jr., Chris Matthew and Rupe Hewes, then, we give our fond-est regards. Your Acting Secretary will take the responsibility for the quasi-legal summons many of you received, com-manding your presence at the Reunion. We hope also by this time that Bob Anderson isn't stuck with a big deficit in his capacity as Reunion Treasurer, that Kemp Maples and Bill Verrochi have rounded up the last stray golfers, and Fred Perry isn't still trying to fill 150 hotel reservations. Perhaps by this time Gus Calleja will be back in Havana, from whence he came for his annual visit.

We have a fine letter here from Ray Richards, who wrote in April, just too late for the June notes: "Congratulations on the interesting and extensive class notes you have contributed to recent is-sues of The Review! I look forward each month to learn the latest of the Class of '43.

"You probably are familiar with most of my story of the past 10 years, but I'll give you an abstract and bring you up to date. My three years in the Ma-rine Corps after graduation were quite uneventful except, of course, for my mar-riage in 1944 to Randi Christophersen of Milton, Mass. Otherwise, most memora-ble were a year as instructor at the M.I.T. Radar School and six months in

Tientsin, China, immediately following the Japanese surrender.

"In 1946 I was employed by the Koeh-ler Manufacturing Company of Marlboro, Mass., and was elected general manager in 1950. Koehler is one of two U.S. manufacturers of miners' lamps and in addition produces metal stampings on contract for TV sets, clocks, and so on. The company is quite small and probably will not grow much so long as the ailing coal industry remains our principal mar-ket; but we have many interesting prob-lems in the fields of storage batteries, illumination, and electrical-mechanical design.

"I participated in some of the early planning for the forthcoming reunion and was anticipating it with pleasure. Now I regret to say that I shall not attend. A few months ago Randi and I decided that this was the year for a long-hoped-for trip to Europe. May and June seemed to be the most convenient months, so we shall leave on May 16 for a six-weeks' tour. By flying both ways we can spend a little time in England, France, Bel-gium, Holland, and Denmark, and still have three weeks for Norway, which is of special interest to us. I expect we'll be sightseeing in the fjords of Western Nor-way at reunion time. The fjords surely will be enjoyable, but hardly more so than the reunion promises to be for those who can attend.

"Jim Hoey and his committee are full of enthusiasm which guarantees a mem-orable occasion. My thoughts will be with you, and you have my best wishes for a very successful get-together. See you at the 15th!"

From the Dallas, Texas, *News* we have an article which tells us that James T. Harker has been transferred to the Dal-las offices of the General Electric Com-pany to provide service in the expanded silicone-rubber activities of the company.

In February's notes we told of the en-gagement of Paul Manger to Claire Stolzenberg; in fact, they were married in New Haven, Conn., on February 21, and are living in New Haven now.

The clipping service also sent me an article about myself, which appeared in the Hartford *Times*, to the effect that I originated a petition to do something or other about the sewer and storm water systems in West Hartford, Conn. But I originated something better than that, for on April 30, 1953, my wife, Jackie, and I became the proud parents of our first child, a boy named Gordon Alan Fein-gold. With this bit of busy news I regretfully sign off as your Acting Sec-etary, with sincerest thanks for allowing me to pound out these notes to you all during the past nine months. — RICH-ARD M. FEINGOLD, *Acting Secretary*, 49 Pearl Street, Hartford 3, Conn.

#### • 2-44 and 10-44 •

Yes sir, fellows, the old Classes of 2-44 and 10-44 are still around and kicking. With our 10th Reunion coming up next year, these columns will be replete with the comings and goings of our classmates.

Speaking of the forthcoming 10th Re-union, the 2-44 Class President, Langden Flowers, and 10-44 Class President, John



Hull, have appointed committees to organize the 10th Reunion. For 2-44 the committee consists of Malcolm Kispert, Robert Plachta, Bob Peck, with Ken Rehler as chairman. For 10-44 the committee consists of Al VanRennes, John Granlund, Bud Bryant, Chuck Arnold, with Scott Carpenter as chairman. A first most important step was taken in deciding to hold a joint 10th Reunion. The Reunion will be organized by the above joint committee with Scott and Ken as co-chairmen.

As a start several of your committee were invited to attend the 10th Reunion of the Class of '43. Seeing a well run reunion first-hand will help them to put together a whiz bang program for you in '54. Locations for the Reunion are being investigated this summer. Subcommittees for publicity are presently active. The program resulting from their labors will be presented to you in the fall.

I don't think we fellows of 2-44 have been very co-operative in the past in furnishing material on our activities to the Class Secretary for publication in these columns. This should be rectified. Toward this end, the reunion committee is going to help the Class Secretary solicit this information during the summer. It will be published during the winter when *The Review* starts again in November. Why not bypass this solicitation by sitting down now and writing a letter to accompany your check for class dues? How many children do you have? How many wives? Is your hairline still receding? Where in the world are you now? How's your professional life? You know the kind of things that your friends would like to know. Look at any past Review for typical examples, and mail it out to the Class Secretary or to me, Ken, at the address below.

Here's a little news of some of your friends and classmates. Mal Kispert et al now have number four child. That makes two of one kind and likewise for the other kind. Mal insists he is not trying to offset the population shift westward all by himself. Speaking of the West, Bob Nicolait, Joe Kaufman, and Stan Levalle, are in the Los Angeles area. All staunch dorm men in the good all days. Nondormers Carl Roden, Wil Gilliat, Warren Matthews, and Geff Robillard are all in sunny Cal., I understand. I missed them when I was there in February. I did see one old friend of us all in Las Vegas — George Marakas, Class of '43, now selling torsion axles out of Chicago. What was he doing in Las Vegas? Same thing I was — trying my hand at roulette. I lost. On the return flight I flew from Buffalo to Boston with Johnny Chisholm who is making the electronic dust fly around Bell Aircraft in Buffalo. I hear he is doing a fine job there. I wonder if Jack Littleford, ex Alameda, Calif., ever joined in his father's mining activities in Rhodesia, South Africa?

Duke Kahl was married last fall and is now living in Connecticut. Newt LeBaron got his doctorate in brain chemistry. Hank Bowes put in several years at Eastman Kodak in Rochester working on various digital circuits. I hear rumors that Hank has returned to the New England area. Bob Dew came back to M.I.T. for

graduate work, specialized in ceramics, got his doctor's degree last June and is now with American Lava Corporation in Chattanooga, Tenn. Walt Turner wrote to me recently from Maine but I don't have much news on him. Ralph Seferian was married about the first of November last year to Esther Begosian of Pawtucket, R. I., and is working at Standard Oil, New Jersey. Ralph is quite a musicologist, and has conducted informal classes in music appreciation. Bob Meny is also with Standard Oil in New Jersey.

Howie Weaver and Peggy produced twins last fall making his children number four. Howie works for Cabot Carbon Company in Pampa, Texas. Harry Kenosian worked awhile on the Whirlwind computer at M.I.T. and since has been in the computer department of Burroughs Adding Machine Company in Philadelphia. The last time I recall seeing Bill Lindsay and Bruce Kingsbury was at Navy Midshipman School at Cornell in 1944. Gene Sard is still with Airborne Instruments on Long Island, I believe. John Egbert has been at Doelcam Corporation here in Boston for a good many years. Justin Margolskee has been at Raytheon in Waltham for over six years. His work has centered primarily in servo-mechanisms and missiles and he has attained the very commendable position of section head. Dick Whiffen has spent several years at the radio division of Bendix in Baltimore. A very nice write-up on Dick was in *Changing Times*, the Kiplinger magazine, about a year ago.

Class notes material has been coming pretty well for the Class of 10-44; however, you probably will be contacted during the summer in order to supplement still further the present status of long unheard from classmates.

A number of our Class are still in the New England area. I understand Gil Krulce has just returned to Boston and is living with his folks in Belmont. Walt Gray has been with Raytheon in Waltham for seven years now working on digital computers and long range radar. Several excursions to White Sands, N.M. and various points East have kept him from becoming restless. Also, I understand he practically commutes to Washington. To rest his mind, Walt spends considerable time at the organ keyboard entertaining his wife and two lovely children.

A joint cocktail party was held at the Proctor Room in the M.I.T. Faculty Club on the afternoon of Alumni Day this year and was enjoyed by all who attended. It did present a first opportunity for a joint social event between the two Classes. By the way, fellows, a budget subcommittee needs some money. Also to contact the whole Class by mail to get news for these columns on your friends and buddies, our treasuries need replenishing. It's been the practice in the past to ask for class dues of \$5.00 about 10 years after graduation. Thus it is appropriate now to ask for this paltry sum. After all \$.50 per year for successful Tech men is "peanuts." Mail your check tonight to Mal Kispert of 2-44 and to Jim Mulholland of 10-44, made out to Treasurer of your Class. Mal is at M.I.T. which address you all know. Jim's address is appended hereto. — JAMES S. MUL-

HOLLAND, JR., Secretary, 1172 77th Street, Brooklyn, N. Y.

## • 1945 •

Since summer is here and since these will be the last class notes for this volume of *The Review*, let's just say we are sorry we didn't keep our April promise to be with you in the June issue. I shall accept the blame by making up such excuses as files misplaced by the Navy in trans-shipment to White Plains, or New York has too many television channels, the spring was too wet, and so on, not an excuse such as a lack of news from you hundreds of prospective correspondents.

Nick and Rosemary Mumford recently announced the birth of Elizabeth Davis, born on the Ides of March, 1953. This latest child should put the Mumfords near the top of the Class with regard to productivity. They now have a total of four — two daughters and two sons. Jack and Eileen O'Shea had their first son, Kevin Carter, on February 24. Kevin joins his sister, Jacqueline, who is nearly four. The recent birth announcement was our first communique from Jack in years. It was great to hear from him, for the last we can remember about Jack was his running away with track laurels at the Institute. Jack is working for Bell Laboratories in Whippany, N.J., and resides nearby in Summit.

The marriage pickings are slim! Must be that everyone is married. Is that right, Steve? Margaret Pierce, daughter of Mr. and Mrs. Frederick G. Pierce of North Scituate, became the bride of Walt Kovalski in Cohasset, Mass., on February 14. Walt is still with Bethlehem Steel's Fore River Shipyard and lives nearby in Wollaston, Mass., with his bride. In January the engagement of Mary Patricia Lilly to Lawrence W. Keepnews of Flushing, N.Y., was announced by Dr. and Mrs. Goff P. Lilly of Charleston, W. Va. You probably don't remember but Larry is an engineer turned lawyer for he graduated from the Harvard Law School in 1950 and is now with the law firm of Cahill, Gordon, Zachry, and Reindelin, New York.

We have a new class celebrity — a rummy! Yes, in March, Victor Rodriguez-Benitez announced the official opening of a new and ultra-modern pilot plant for research in rum manufacture. The pilot plant will be operated by the University of Puerto Rico, and it is reported that the new research unit will have a daily capacity of 150 proof gallons of rum. Congratulations to Victor Rodriguez-Benitez, the Director of the plant.

That's the news but we shall attempt to piece together a bit by reviewing the most recent address changes. John S. Hawkins is still at Ingalls Shipbuilding in Pascagoula, Miss.; Pete Schwab, an old Long Islander, now lives in Lakewood, Ohio, but is still with Sperry now operating as a field engineer. Tom Stephenson has moved Alcoa's new reduction plant in Benton, Ark., to the Alcoa Building in Pittsburgh. Congratulations on your promotion, Steve! It appears that George Bickford has left Whittin Machine Company for he is now in Fayetteville, N.J.;



we imagine George is still in machine tool design, however. T. Nicholas Berlage is back in Minneapolis with the large regulator concern that bears much the same name. Chuck Buik, our old V-12 bugler, recently completed a satisfactory tour of duty at the Naval Gun Factory in Washington and is presently stationed at the Naval Personnel Center in Omaha, Neb. Homer D. Eckhardt recently moved to Binghamton, N.Y., where we trust our up-state good will ambassador has made contact. Hal Thorkilsen recently moved from Tenafly to Fanwood, N.J.; he must be a New York commuter. By the way, you New Yorkers can call in your news; there is no need to write!

John B. Handrahan has been ordained a priest in the Jesuit Order. Father Handrahan's address is the Department of Physics, Holy Cross. Jim Brayton, our construction engineer, is back in one of bean town's suburbs, Natick, Mass. I would imagine that if one scanned Boston's skyline one would see the new building in which Jim would be the so-called "bossman." Selma Swift recently moved from Los Angeles to Hollywood. We have several other address changes, but I hesitate to report them for I have no story to go with the change. Let us know what you're doing and we'll give you the change of addresses! Seriously, should you have lost contact with an old buddie, drop us a line and we shall forward his address promptly. Oh, oh, one more address change, Bill McKay is back in old New England as a civilian again.

I ran into Dick Jorgenson in front of Grand Central recently. Dick was in town on business but came through in the clutch with some news. Dick is district sales manager for Petroleum Processing with offices in Cleveland. From what he said he sees quite a bit of Stan Brown, Ted Hellmuth, 10-44, and Mal Crowther. Brownie is still with New Britain Machine Company but is now a sales engineer in Ohio. Ted is with St. Regis Paper Company after several successful sales ventures in such fields as farm fertilizers and slot machines. Mal completed his two-year Navy recall last December and is now employed by a glass products outfit in the midwest.

In his letter of April 24, Chick Street said that Springer has sprung. It isn't so! Springer has strained to put out what he (that's me) considers a poor offering. How about making it a little easier — send us some news through the summer. Have a good summer you guys and gals; we shall see you in the fall. — CLINTON H. SPRINGER, *Secretary*, Firemen's Mutual Insurance Company, 420 Lexington Avenue, New York 17, N.Y.

## • 1947 •

We received a note from someone who was not a member of our Class. I quote the note: "Although not a member of '47, I occasionally (*sic*) read your notes, as I know many of the fellows in that Class. Noted your desperate plea the other day, and today happened to come across the attached clipping. To reestablish your faith in mankind, I'm sending

it along. I believe this fellow was in '47, seems to me he was the trackman." The note, was, unfortunately, unsigned — but my heartfelt thanks to the noble anonymous writer.

After that emotion-packed paragraph above, the news in the accompanying clipping may almost come as an anticlimax. Anyway, this is what it says: "James Prigoff, of the City Athletic Club, upset the seedings in the annual Fowler Memorial squash racquets tourney at the 7th Regiment Armory by eliminating the top-ranked player, Malcolm Roberts, of the Lone Star Boat Club." Kudos to Jim for his remarkable accomplishment in the quarter finals of the tourney. Maybe Jim, himself, will write and tell us how he made out in the later rounds.

By the way of various public relations departments, we have the following items to report. Dan Maisel, a chemical engineer in the Development Division of the Standard Oil Development Company, was the principal speaker at a recent meeting of the North Jersey Section of the American Chemical Society, where he discoursed on "Aromatic Chemicals from Petroleum." Also taking to the speaker's platform was Gordon Raisbeck, who delivered a talk before the Long Island subsection of the Institute of Radio Engineers, entitled "Developments in Transistor Circuitry." Merton Lamden, an assistant professor of biochemistry in the University of Vermont College of Medicine, has received a grant-in-aid of \$1,000 from Hoffman La Roche, Inc., for research on "The Role of Ascorbic Acid in Oxalate Formation." Another successful classmate is Theodore Thomas, science columnist for the Stamford, Conn., *Advocate*, and employee of the American Cyanamid Company in its Washington patent office. Ted recently passed the bar examinations for the District of Columbia.

One engagement to report—that of Dieter Goetze to Cynthia C. Fox of Lowell. The couple plan to marry in June. Dieter is currently serving as a research associate with the Raytheon Manufacturing Company in Waltham. On the distaff side, one of our more talented co-eds, Adelaide Toombs, is a very recent bride. Adelaide was married to Olof Sundin of Sweden on April 11 in Cambridge. Adelaide told me that after their honeymoon in Canada she and Olof will be going to live in Hudiksvall, which is some 200 miles north of Stockholm (Brrr!). Previously in this column I have mentioned Adelaide's work as a portraitist in porcelain, but it appears from an article in the feature section of the Boston Sunday *Globe* that she is the only practitioner of this painstaking art form in this country. So, as the article points out, "Sweden's gain is the American art world's loss." — CLAUDE W. BRENNER, *Secretary*, 1470 Beacon Street, Brookline 46, Mass.

## • 1948 •

In the spring, with our Fifth Reunion only a short time off, a young ('48) man's fancy apparently turns to thoughts of his old school chums; in fact, the mailman almost got to look familiar this past month. But let the guys pass along in their

own words what's been happening to them.

Curtis Green: "Since I have not written a letter to the Secretary of the Class of '48 since we graduated from Tech, I feel that it is now high time to do so. The big news of my life is that I am to be married to Joan Gock of San Francisco in about a week and a half. Last fall I was released from the Navy after having been recalled as a member of the Reserve, and I met Joan while I was stationed on the West Coast. I also managed to get in about six months on an aircraft carrier operating in the Far East.

"The usual procedure seems to be for graduate engineers to wind up as business men. However, I pulled a slight switch on this custom. I graduated in Course XV, and am now employed as a process engineer by the Koch Engineering Company. It is my job to assist in the design of refineries. I had hoped that I would be able to attend the Class Reunion this year. However, I am taking my vacation at the time of my marriage and so I am afraid that I will have to wait awhile before I am able to make a trip to Boston."

"We're twins!" write Katherine and William Levedahl, born to Jack and Charm Levedahl in March; and quite a feat it was to write for two who weighed only 12 pounds, 7 ounces, between them. They add, too, that their Dad is now doing combustion research at the National Bureau of Standards in Washington.

Al Baum: "I've just got engaged to Corrine E. Berg of Seagate, Long Island, a former Conover Model. So far, plans look as if we'll be getting married May 31, so that I doubt if I'll be back from the honeymoon in time to make the Reunion at Tech. Give my regards and regrets to all the gang." (No excuses other than honeymoons will be accepted, however, as reason for not attending the Reunion.)

Ed Stevens: "... After graduation I began working for the Spencer Chemical Company as a technical trainee, which training included periods of instruction of varying lengths of time in each department of the company. Upon the completion of this program I worked in the office of the Works Manager of our largest plant near Pittsburgh, Kansas, for about a year performing miscellaneous tasks among which were studies of both operations and costs. I then was transferred into the production department of the plant and worked as a supervisor during the initial operations of our ammonium nitrate grilling plant and later as supervisor in the production of anhydrous ammonia, methanol and dry ice. These latter two jobs entailed swinging from one shift to another every two weeks. The first of this month I was promoted to assistant to the General Works Manager. Such is the business career of a Course XV graduate.

"The domestic side of my life has also undergone changes. In November, 1950, I married Ann Pate of Joplin, Mo., and in February of this year became the subversive father of a daughter, Susannah. I have seen both Jim Leonard and Bernie Duffy twice since graduating but, aside from these two, my only other association

with M.I.T. or its Alumni has been through the Alumni Fund and T.C.A. This windy note should hold me for another five years."

Jack Winninghoff: "It was nice hearing from you. In answer to your question regarding the Reunion, I can only tell you that I may come. The entrance of a small child into our midst (Mary Ellen, by name) has complicated what were once easily made decisions by a factor of ten (born January 25, 1953). Although I have some contact with Tech men — none were in our Class. I intend to get in touch with Gene Winne who is about two hours from here and perhaps we can both make it if the baby sitting problem can be worked out. (His second was born about a week before our first.)

"Briefly here are the highlights of my life since graduation: September '48 to October '50 — worked for Alcoa as sales engineer in Cleveland selling Al. and Mg. castings. September 30, 1950 — got married. October '50 to June '52 — recalled to U.S.A.F. — did a little teaching, a little flying, and bought research projects for the Air Force at Wright Field. We had about 15 officers in the office. Eleven were XV graduates of June, 1951, and then there was me. In October, 1952, I started with the Perkin-Elmer Corporation, Norwalk, Conn., and have handled their research and development contracts since. . . . The Company is excellent, and the job is a XV man's dream — enough engineering to be stimulating without being tedious and the same with the business."

Louis Kreek: "I've been meaning to drop you a line for some time and am just getting around to it. I am now a patent attorney with Pittsburgh Plate Glass Company and have been since January. So far I've prepared several applications for filing in the Patent Office. Getting the necessary information on inventions is an interesting, though not always easy, task. Research reports are a big source of information, but they usually leave something out; and so the men in the Patent Department fill in the gaps through visits to the Company's plants. I've made two visits to plants of Columbia-Southern Chemical Company (a wholly owned subsidiary of Pittsburgh Plate Glass Company) so far and shall be in Akron on April 6 and 7 to visit Columbia-Southern's Barberton plant. The plant visits are very interesting, but evenings are rather dull.

"From the time I was graduated from M.I.T. until I joined Pittsburgh Plate Glass Company, I was an examiner with the U. S. Patent Office in Washington. Dennis Allegrèth was also an examiner with the Patent Office until the Army called him to active duty. Both Dennis and I were graduated from law school last May, he from Georgetown, and I from George Washington. We were both admitted to the District of Columbia Bar in October. I hope to see you at the Class Reunion in June."

Werner Gumpertz, now a professor in the Department of Building Engineering and Construction at M.I.T., spoke as a panel member at the McGill Conference on the Construction Industry Integration in Montreal on March 11 and 12; Fred Granger was promoted from head of Varo Manufacturing's mechanical design sec-

tion to supervisor of planning, and on February 22, Stephen Miller was wed to Georgette DeLisle.

In case you're wondering who is planning to come to the Reunion, we'll list the following names of men who are definitely or probably coming. If your best friend isn't on the list, write him a note and make some plans to attend with him. Harold Ottobriani, Dan Lanciani, R. A. Ormiston, John Mitchell, Robert Lovezola, Manuel Kramer, Leo Martin, A. A. Yurgelun, Jim Theodosopoulos, S. J. Tilden, Frank McGowan, Charles Deane, Edward Capen, E. Garforth, Chester Vappi, Frank Viera, Al Baum, George Brown, Nicholas De Wolf, Roy Evans, Adolf Monosson, Arthur Renz, Robert Bliss, Philip Bragar, Albert Carr, Bob Mott, Arthur Brusila, Warren King, R. E. Annis, Stan Jensen, Bob Wofsey, A. W. Van Abs, Joe Yance, Russ Stevens, Stue Thayer, Ron Kallman, Dick Harris, Hank Gilbert, Stephen Wilder, Harry Jones, Louis Kreek, Tom Lacy, Vic Dawson, Ployer Hill, Don Floyd, Stephen Miller, Arthur Waxman, Emerson Callahan, Dave Cist, Jerry Krinsky, Bill Zimmerman, Ben Brettler, Ken Brock, Norb Andreas, Jim Adelstein, and Jack Winninghoff.

Hurry up and add your name to the list. — WILLIAM R. ZIMMERMAN, *Secretary*, 1604 Belmar Road, East Cleveland 18, Ohio. *Assistant Secretary*, RICHARD H. HARRIS, 26 South Street, Grafton, Mass.

## • 1950 •

From Bob Mann's long and newsy letter which we received and told you about last month we quote: "John MacMillan . . . with Boeing, but currently the family (they have a little girl now) is down at Oak Ridge where Boeing is sending John through the school of reactor technology. Charlie Levy is currently at the Watertown Arsenal engaged in physical chemistry research. Ken Olsen and his charming wife and daughter are doing very well. He is assuming quite a bit of responsibility in his capacity of a division chief on the Whirlwind computer project. Jack and Ruth Weaver recently sent regards from Vatican City; they somewhat amusingly lament the hurried nature of their European 'vacation.'" Thanks, Bob, for bringing us up to date on the activities of so many of the Class.

Had an interesting visit with Roy Hale, now finishing out his third year in the Air Force. Roy, now stationed at Wright Patterson, is apparently very happy with his choice of the Air Force as a career. He's working at one of the wind tunnels, and looking forward to a promotion to captain in the not too distant future. Incidentally, the Hales were visited by the stork recently, who left them a charming young lady whom they named Adrienne.

Steve Senzer writes from New York about his job with Snyder and Company, who are in the export book business. A far cry from engineering, but Steve seems to be really enjoying it. Also in Steve's newsy letter are the doings of Max Lebowitz, in flight training in the Air Force; Lou Washauer and his wife Janice, stationed in Baltimore with the Army; Bill Bibb, working for the *Daily News Record*,

a textile trade paper, in New York; Mal Lipson, working for M. W. Kellogg Company, after completing graduate work at the Institute; Dave Levington in New York, still with Abraham and Strauss.

In the romance column is the announcement of Al Vort's marriage to Audrey Robbins in Great Neck, L.I., and the engagement of Walt Allison to Margaret Bowers of Boston.

Spent last Sunday wandering around the confusion of the exhibits going up at the I.R.E. national convention in New York and ran into Hollis Gray supervising the erection of Technology Instrument Company's booth. He reports of Mel Gardner, now out of the Army, and studying at Stamford Business School; Don Gray at Project Lincoln; Ed Jacobsen working on his Ph.D. at the Institute; Warren Roberts stationed at Cambridge Air Force Research Center; Jerry Altman at Laboratory for Electronics in Boston; and Bob Cesari stationed at Frankfort Arsenal.

Incidentally, as a result of a new Air Force policy, Mark Baxter, Jim Jensen and I (and probably many others of the '50 R.O.T.C. class) are now sporting the silver bars of first lieutenants. — MYLES S. SPECTOR, *Acting Secretary*, 3114 Sunny Crest, Dayton 9, Ohio.

## • 1951 •

It is always a sad duty to announce the death of another member of the Class of 1951. Thus, it is with deep regret that your Secretary announces the death of Lieutenant Commander Cleveland L. Null. A letter from his wife informs us that he was killed last fall in a plane crash off the coast of Portugal.

Because of the scarcity of news, it was necessary to pass up the class column for the June Review issue. The interval of time which has elapsed has supplied us with odds and ends of news regarding '51 men. In the marital area, the following said "I do": Bill Curby and Ann Ward at Chestnut Hill in February; Leon Olbrys and Betty Ernst in April at Waltham; Bill Ramsey and Charlotte Finley at Woburn in March (Bill is doing research work at M.I.T.); and Campbell Searle and Eleanor Reed in February at Boston. Also, your Secretary left the ranks of the unmarried men on May 30 at Arlington where he and Irene Gallagher took their marital vows.

Now for the news of the fellows in the service. Tom Biggs has donned his "civvies" after completing his tour of duty. Fred Fead is serving aboard the U.S.S. *Dennis Buckley* (DDR 808), care of the F.P.O., N.Y.C. Erwin Harris dropped a note to say that he is now doing physics research at the Signal Corps Laboratories at Ft. Monmouth, N.J., after the Army interrupted his graduate work at Carnegie Tech. Erwin reports that Chuck Hieken is also in his detachment at the Labs. Stan Jones has left the states behind as he headed for overseas duty. Tom Kelly received his promotion to lieutenant, junior grade. Presently, he is chief engineer aboard the U.S.S. *Cotten* at Newport News, Va., while the ship is being made ready for duty in the Pacific. In the May class notes column your Secretary had in-



advertently stated that Allan Larsen had "recently" been assigned to duty at Wright-Patterson A.F.B. at Dayton. A note from Allan informs me that "recently" can't cover the 21-month tour of duty he had spent at that field. Allan adds that he was discharged in April and is presently working at Raytheon Manufacturing Company in Newton. He is in their servo group which is responsible for designing automatic control systems for radar antennas. (Apologies accepted, Allan?)

Bill Pinkham was promoted to the rank of lieutenant (junior grade) while serving aboard the destroyer U.S.S. *Lofberg* on his second tour of duty in the Western Pacific. (If you read this, Bill, tell me: Have you visited Mog Mog Island at Ulithi?) Another addition to the rank of civilian first class: Roger Schonewald. Bill Shenkle also has completed his tour of duty. On the other hand, the Army now has in its employ Peter Sieck who is presently at the Frankford Arsenal in Philadelphia. A long news article covering the exploits of Russ Shorey has arrived. Space limitations limit coverage so I'll give you some of the highlights. Russ was one of nine men first to go through a winter on the 10-mile long floating ice island named Fletcher Island which was drifting 300 miles from the North Pole. Russ, in his duties as an Air Force geophysicist, worked on the recording of data covering the properties of the ice for research purposes. For three and a half months the party had to operate in sub-zero darkness. Temperatures on the island ranged from 25 to 40 degrees below zero outside. The men ate and slept in three and one-half Jamesway huts locked together with partitions knocked out to form a single building. Clothing was simple, long underwear, a sweater and parka with felt boots and a couple of pairs of heavy socks. While Russ was on the island, it moved south at a rate of a mile per day. In March Russ returned back to his post in the geophysics laboratory at the Air Force Cambridge Center. In next June or August, Russ will return to civilian life. Dick Valpey was promoted to first lieutenant with the Army in Germany. Dick is stationed at Ansbach, Germany, where he is in the repair branch of the Army Signal School.

At the end of March while on a trip to Cincinnati your Secretary arranged a get-together with Gerry Burns. Gerry, in turn, provided transportation for a mid-night ride (reminiscent of Paul Revere's ride) to a rendezvous near Dayton where we met Ralph Romano and Bob Gooch. As customary we all had an excellent time exchanging news about '51. Ralph and Bob expect to complete their service time by July. Bob will return to Tech in the fall to work for a master's degree. In April Bob was married to Rachel Dunaway at Amarillo, Texas. Gerry was engaged in numerous activities as per Tech. Ralphie reports that marital and service lives are not diametrically opposed; in brief, Ralph seems to thrive in both activities.

Tony Balzebre is now connected with the Allied Industries Corp. in Miami, Fla. Roald Cann is working at the M.I.T. Dynamic Analysis and Control Laboratory. Alan Faller is also at Tech, but he is working in the Meteorology Department.

Clarence Gregory has been awarded a graduate fellowship by the National Science Foundation to be applied to the completion of studies leading toward a doctorate in Chemical Engineering at M.I.T. Clarence expects to receive his doctor's degree in June of 1954. Bob H. Lucas was named assistant to the president of the Pittsburgh Steamship division of U. S. Steel. Prior to the appointment to the new position Bob was chief engineer of the Michigan Limestone division of U. S. Steel. In 1950 Bob attended M.I.T. where he received his master's degree in business and engineering administration. Roger Milkman is working at the Biological Laboratory at Harvard. In January Dr. Arthur B. Metzner was appointed assistant professor of chemical engineering at the University of Delaware. On May 5 Adone Pietrasanta discussed "Practical Sound Control" before the Boston Section of the American Society of Refrigerating Engineers.

In April David I. Sinizer described recent developments in "Instrumentation for Blast Furnace Research" to members of the American Institute of Mining and Metallurgical Engineers meeting in Buffalo. Dr. Sinizer is in charge of metallurgical research at Arthur D. Little, Inc., Cambridge, Mass., consulting research and engineering firm whose engineers developed the high top pressure-operated blast furnace.

Other news items: Bill Spicer is a member of the Physics Department at the University of Missouri. Dr. Hsi-Teh H. Tsao is working at the Institute of Biochemistry and Biophysics of Academia Sineia at Shanghai, China.

To further fill out this column Art Wasserman sent in a letter which gives some of his impressions of Europe. Art says: "England is a place of far sharper weather contrasts than Boston (if that is conceivable) which explains why the British are such a hardy and resilient people. They have to be to face the pronouncements of the weather man! Living conditions have been steadily improving over the last year, anyway, and I should say that things here are quite a bit better than the American press would have us believe at home. The number of food items rationed has been decreasing steadily and there are now practically no items which you cannot buy if you have the money. The scheme of socializing medical services has worked out extremely well after some initial anomalies. At the present time, the middle and the low income class are far better off than ever before in the cost of medical treatment, in the quality of treatment, and in the efficiency with which treatment is made available to them." Art adds: "During Christmas vacation I managed to get in two weeks of skiing in Austria. For spring vacation I plan to visit for a few weeks with some families in England, Wales, and Scotland." Art reports that Pete Silveston is working toward a doctorate in Mechanical Engineering at the Technische Hochschule in Munich, Germany. Pete is working with a Dr. Schmidt who is well known in the fields of thermodynamics, heat transfer, and rockets. Pete met Tom Callahan at a pre-Lenten Ball in Munich, Germany. Art concludes: "In

the summer, I'm planning a tour through France, Spain, Italy, Austria, Germany, and the Low Countries with some other Oxford people." Other news: Fred Weitz will head for Air Force duty after he completes his studies at the "B" School. George Underwood has already left to attend the naval officers' school at Newport, R.I.

Well, gang, it is time to close up shop for this year. I hope that each of you have a very carefree summer. See you again next fall. In the meantime, please write and let us know how you are. — STANLEY J. MARCEWICZ, Secretary, R. D. 2, Box 70, Somerville, N.J.

## • 1952 •

Here's our last gasp until next November. In the next few months you will just have to get along without that friendly little epistle (The Review, that is) arriving the first part of every month, or even the last part of the month. That's just the way life goes.

Dippings from the newspapers: The Boston papers featured the marriage of Joan Batchelder of Belmont, Mass., to Donald Keyt of Indianapolis, Ind. on March 28.

Both the Beverly, Mass., *Times* and the Bangor, Maine, *Sunday Commercial* announced the marriage of Patricia Bothwick of South Brewer, Maine, to Ed Fish of Beverly, Mass., on February 28. At present Ed is with the United Shoe Machinery Corporation in Beverly.

The Haverhill, Mass., *Gazette* announced the marriage of Jeanne Myrick of Amesbury, Mass., to Bob Elliott, also of Amesbury on March 28. Bob is at present a lieutenant in the Army in the far reaches of the Pacific.

In the society columns of the Boston *Globe* was the announcement of the marriage of Carole Starr of Merrymount, Mass., to Art Schein, of Chestnut Hill, Mass., on February 23. Art and his bride are living in Austin, Texas, where Art is serving as a lieutenant in the Air Force.

From my own home town newspaper, the *Englewood Press-Journal*, comes the news of the engagement of Ed Olney to Marilyn Patterson of Akron, Ohio. Ed is a lieutenant in the Quartermaster Corps which is now a part of the Far East Command.

In another vein the Lowell, Mass., *Sunday Sun* gives us news about two '52 men. Merwin Blum and Phil Sperling are studying for their M.S. in Textile Technology at the Lowell Textile Institute.

The Quincy, Mass., *Patriot-Ledger* on March 24 had the pictures of two '52 men beaming out onto the readers. Bob Johnson recently received his ensign's commission at the Newport, R.I., naval base and has now been assigned to the destroyer, *Myles T. Fox*. John Cammell is now a Naval Aviation Cadet at the U.S. Naval Auxiliary Air Station, Whiting Field, Milton, Fla.

Skimmings from the mailbag: Mrs. Conley (Jim Conley's mother) writes: "Jim is not married yet. He graduated from the Williams Air Force Base, Chandler, Ariz., as a second lieutenant and jet pilot on December 19, 1952. He then took his gunnery school at Luke Air Force Base, Glendale, Ariz."



He got 19 days' leave after which he reported to Camp Stoneman, Calif., on April 23. From there he will be flown to Hawaii, Japan, and finally Korea. He will get back to the states after 50 missions or 11 months." Best of luck Jim, and thank you very much, Mrs. Conley.

Mrs. Olney (Ed Olney's mother) writes: "Ed is now with the Army QM in the Far East. He recently became engaged to Marilyn Patterson of Akron, Ohio."

Stan Sydney (this column's ever dependable source of information) writes: "Harvey Eisenberg, formerly at Fort Lee, Va., is now at First Army Headquarters, Governors Island, N.Y. Ronnie Bustead is at the same place. Gil Steinberg got married to Rita Haber last Christmas, Gil is home now but will be going to the Far East in April. Marty Levin is at Stanford University as a teaching assistant. Just earning enough money, so he states, to keep himself in bread and beer.

"Bob Lurie and Nancy Alperin, of Cambridge, were recently engaged. Ray Loomis is at Harvard University studying Soil Mechanics under two of the leading men in the field. He will get his S.M. in June. Frank Carta will also be getting his S.M. in June in Aeronautical Engineering. Werner Kahn dropped us a letter recently. He mentioned that Luis Capandeguy from Montevideo, Uruguay, married Beatrix Jacoby, also of Montevideo, on last February 24. Werner is in Rio at present.

"Frank Wheby is going to Bremerhaven, Germany; Jim Strawn and John Small to Yokohama. Jimmy Divito got married and is now with SCARWAF at Orlando Airbase, Fla. Saw John Small here in Boston a few weeks back."

Bob Shaver is getting married to a girl from Minnesota on June 8. Unfortunately I don't remember her name. Gene Amazon dropped me a note from Rome. He will probably be joining the Armed Forces overseas. His draft board is breathing down his back. Dan Lycan is a lieutenant with a Corps of Engineers Construction Battalion somewhere in Europe. Ted Uhler is with Aramco in Saudi Arabia.

Danny Sullivan writes: "Just a quickie to let you know that Sullivan is still alive after a rigorous introduction to Army life. I finished a ten-week course in Ammunition Records last Wednesday and received my orders assigning me to the Ordnance School as an instructor. I will shortly start an instructor training course (three weeks), then become a teaching assistant and observer for five weeks, and then finally get a class of my own. I have seen a number of M.I.T. men here during my stay, including Art Martin, John Mattson, Al Hofstatter, and so on." Dan, you can guess by his letter, is a private with the Ordnance Corps at Aberdeen Proving Grounds. I ran into him just a few weeks back and he is now teaching principles of rocket propulsion at the Ordnance School.

Sam Mitchell, pride of the Chemical Corps, writes: "As I guess you can imagine, things have really been booming out here (Yucca Flats, Nev.). My unit determines radioactive contamination and controls entry into the contaminated areas. Las Vegas sure is a great town. I'm losing my shirt at gambling but there are some fine shows to take away the sting of

defeat. I expect to be back at Rocky Mountain Arsenal in June."

Bob Damon, the Fort McClellan bombshell, writes: "I saw where Sambo Mitchell gave you a little vague news on the old Fort and its doings for The Review. Thought I might elaborate a bit here and there for the next issue. There are practically as many Instituters around here as people. Those from the Class of 1952 follow: Bob Damon—Faculty, Chemical Corps School; engaged at Easter to Barbara Lottinville (Wellesley '51), wedding in June in Kankakee, Ill.; Fitzzy Fitzgerald—Extension Branch, Chemical Corps School; Bill Dunn—Technical Branch, Chemical Corps School; Sam Mitchell—still fissioning out Nevada way; Dirk Plummer and Neil Panzier to Pine Bluff Arsenal; John Camp to Baltimore; Bill Chandler and wife to Atlanta Procurement; that's all I know." Bill Chandler is one of two officers with the Atlanta Chemical Procurement District; he is adjutant for the district. John Camp is now in charge of drawings and specifications for the Chemical Corps Materiel Command.

Taj Hanna writes: "I was in Florida for two months. The sun, water, and sand got awfully boring compared to the everpleasant Ohio snow. Ho! Ho!"

Bob Briber, our own Poo-Bah, writes: "Art Auer wrote from St. Louis saying that he was doing fine. He didn't say what he was doing, however. John Savoca is assistant purchasing and contracting officer at Scott Air Force Base, doing fairly interesting work. Newt Shanbrom is still at the Institute working on his Building Engineer degree. Jack Mankes is still working around Tech, going to a master's degree—he didn't say in what.

I got another interesting letter. It was signed by Arnold R. Splotzkados—evidently George's brother, and to judge from the sound of his initials, an Englishman—who wrote about my offer to kick over for anyone who is having too much trouble to say hi! to the Alumni Fund. He said in part:

"Mighty nice of you, Bob, to offer to help those of us who are strapped for money to contribute to the Alumni Fund. There is just one thing I would suggest. Since you are so generous, and I am one of the ones who is so strapped for cash, how about doing me a favor? Be sure to forward the money to me at my home." Shades of *Voo Doo*, M.S., and "Diamond Sam" Gordon. More marriages: On March 7, Shirley Adams became the bride of Benedict Olson. After a wedding trip in the South the couple will live in Boston, while the groom continues his work on the Institute staff.

On April 25, Jacky Viator and Lou DiBona exchanged their vows. It was just one year ago that this column announced their engagement. Lou is working for Westinghouse in Pittsburgh and other places where his job is taking him.

Miscellaneous: Lieutenants Jack Copenhefer, Gerry Ellis, and George Zavallakes, now of the Quartermaster Petroleum School in Jersey City, N.J., have just begun to ask their friends for good telephone numbers in Yokohama, Pusan, and Seoul. That's right, the three Gold Dust twins are adding to M.I.T.'s representation on the other side of the Pacific.

It is with the sincerest regret that I announce the death of George Dyche. George, who was returning to Stillwater from Oklahoma City, was killed on August 13, 1952. He was an electronics instructor at the Naval Reserve Center, stationed at Stillwater, Okla., at the time of his death. While at the Institute, George was in the Course of Electrical Engineering.

Toodle-oo until next November. Have a nice summer, John Camp. If anyone has any suggestions for improving this column, please write them down and send them to Jerome Q. Sturdley, 1435 Phangschleister Boulevard, Old Bjijourck, Northwest Provinces, Tanna Tuva. He'll know what to do with them. Postage is only Seventeen Dollars, Fourteen and Six-tenths Cents. If that sounds like too much work, just mail me the postage and the suggestions and I'll know what to do with them. — STANLEY I. BUCHIN, Secretary, 150 Tryon Avenue, Englewood, N.J.

## • 1953 •

With this issue of The Technology Review a neophyte enters the ranks of the other class secretaries whose task, or possibly a better word, whose privilege it is to do what we are able to maintain and perpetuate the interest of our classmates in their fellow classmates and their school. The response of approximately 120 of you to the post cards sent in mid-May brought a mixture of joy and consternation to my mind. Joy, because so many of you replied. Consternation, because of the difficulties entailed in mentioning 120 people in an article while still maintaining the necessary brevity and color. Let's proceed to the contemplated activities of Tech's newest and I hope most virile Class.

Replies from those who have sustained the rigors of married life as well as the joy involved proved to be interesting reading. Ernest Allard, Jr., who is a veteran of three years of Navy life and one year of marriage, plans to work as a chemical engineer with the Universal Oil Products Company in Des Plaines, Ill. Ray Adelin (also a veteran) whose wife, Melva, presented him with a son for graduation will work with Douglas Aircraft after visiting his parents in Idaho. Nicholas Fast and his wife, Elizabeth (Radcliffe '52), will concern themselves with the Electric Boat Division of the General Dynamics Corporation in Groton, Conn. Werner Frank (five years of marital bliss and one son to his credit) will combine graduate work with a position at Photo Switch, Inc., Cambridge, Mass. With eight years of marriage behind him, Norman Frigerio plans on more schooling in physiological chemistry at Yale. George Manahan, his wife, and youngster will re-enforce the staff of Raytheon Manufacturing Company in Waltham, Mass. Luciano Mazzola and John Murray will unite forces at Sikorsky Aircraft in Bridgeport, Conn. Luciano and his wife, Ann, are expecting a little fellow in August while John and Joan have checked off three years of married life. Dave Rollins and his wife celebrated their sixth anniversary recently. Dave is planning on more service in the Air Force.

The George Stevensons and their progeny are anticipating work with the Tech-

nology Instrument Corporation in Acton, Mass. Jack Yoblin and his wife are viewing possible homes in the New York, New Jersey area. Jack plans on more schooling while working at the Sintercast Corporation of America. Three little fellows, and mother, and dad, the George Metcalfs will head for Skokie, Ill., and the Cook Electric Company. Haig Marzbanian, after five years of marriage, thinks a vacation is in order before beginning work with the Fluor Corporation in Los Angeles, Calif. Charles Taft and his wife, after a summer vacation, will journey to Warner and Swasey Company in Cleveland.

Suppose we drop the subject of marriage for a time and look at the prospective "troops." Fred Brecher, Paul Champplain, Dave Cravens, Bill Holden, John O'Donnell, Jack Stewart, Eric Schwarz, To'lyn Twitchell, John Weitlauf, Jr., and Joe Woolsey plan immediate service with the Air Force. Jesse Erickson plans about two weeks of fishing, a short stay at Kaiser Aluminum, and then the Air Force; while Dick Lindstrom will occupy himself at Lord Company, Erie, Pa., before following suit. Rolande Plante has made contacts with the Draper Corporation where he expects to work after his "hitch" in the service. Rebel Sauer plans flight training and three years in the Air Force. Rebel is pinned to Helen Foster of Taunton, Mass.; no definite marriage date, as yet. I might mention at this point that I received a few cards with no signatures; this makes the problem of identification somewhat difficult.

A few of the boys have made definite marriage plans in addition to their plans for Air Force duty. Karl Epple plans to marry Nancy Dann of Bethel, Conn., on August 8. Emil Tessin will "take the fatal step on July 25," the little lady, Florence Crowther of Jamaica Estates, Long Island. Chris Whitcombe says that there is a possibility of marriage in September, '54. Thierry Thys is taking things a little more slowly, engagement on June 15 to Charlotte Edens (Wellesley '55).

Let's catch the Army recruits a little later and look at the men whose capacity for schooling hasn't reached the saturation point as yet. John Ballantine, Eugene Hall, Bruce Murray, and Jacob Aghassi tentatively plan on grad school at Tech. Robert Piper, Sheldon Salzman, and Andrew Lemnios will return to the Institute for work in aeronautical engineering. John Martucelli, Max Davis, Jack Friedenthal, and George Dausman will follow the same path after a laborious summer. John plans to marry Vilma Nicolo of Providence, R.I., on July 18. Jack and Max happily report "no female entanglements." Gene Romer will study armament engineering, U.S.A.F.

Don Neuhaus and Jean-Pierre Radley are following parallel paths to the acoustics laboratory at present; while Lloyd Hyman will continue his work in physics. The Chemical Engineering Practice School will have among its new faces next term, Bob Ebeling, Bob Hinds, Joe Myers, Michael Stanfield, and Herbert Vieira. Bob Ebeling also plans to attend the Chemical Corps summer camp at Fort McClellan, Ala. Herb has a summer job with Monsanto Chemical Company.

Roy Blackmer is now concerned with two more years of study in meteorology.

Sieg Wolf is planning a trip home to The Netherlands West Indies after which he will continue his work in hydraulics. Fred Zwerling is going to sharpen his business acumen in the Graduate School of "Club 15." Dick Hilton and Jim Kolb will go on in the field of geology. Jim and his wife, Gloria, celebrated their first anniversary during Senior Week. Dick Hilton (who reports no immediate job prospects) and Joan Fleckenstein planned to announce their engagement in June. Dix Chandley, after a tour of duty in the Ordnance Corps will aim for a master's degree in metallurgy. Jack Webb, Hubert Harriman, and John Hansen all plan on marriage and grad school. Jack will marry Louise Wahlenmaier on August 1, and then work in the gas turbine laboratory. On June 14, Hubert Harriman and Virginia Dey (senior at Simmons) were married. John plans to marry Anne De Lamater of South Orange, N.J. George Wood intends to work for D.A.C.L. on an assistantship. Fred Cronin will be a research assistant in the Servo Laboratory after completing R.O.T.C. camp at Fort Devens. Paul Marino is working toward a master's degree in the Course of Electrical Engineering.

A number of men have decided upon a change of scene for their graduate studies. Robert Schmidt and John Mathis are heading for California Tech. Bob was married on June 26 in Honolulu to Mary St. John, Radcliffe '52. Landry Slade has received an assistantship at the University of Virginia in order to obtain a master's degree in organic chemistry. Joseph Kohn will be at Princeton on a National Science Foundation Fellowship. Louis de Branges will continue his studies within Cornell's ivy covered walls. Stan Bloom plans to attend the "M.I.T. Annex" in Harvard Square where he will shoot for a doctorate in chemistry. Stan has been given a resident fellowship and will teach, part-time Nelson Lees seems to have wanted a change of subject matter in addition to the change of scene; he will be studying contemporary English literature at Columbia. Elliott Lieb will be at the University of Birmingham in England to widen his knowledge of physics. Rainer Sacks after some work with the Foreign Students Summer Project plans on an assistantship at the University of Syracuse. Bernard Paiewonsky will marry Sabina Reissfeld (Brooklyn College '53) on August 8, and go on in mathematics at the University of Indiana. Sunt Techakumpuch will leave the East for work in chemistry at the University of Ill. Mike Rabins has an assistantship at Carnegie Institute of Technology where he will continue his work in mechanical engineering. A few people do not seem to be particularly apprehensive about the future. Ralph Anglin jocularly claims that he, his wife, and their son Robby will "loaf" for the whole summer. Al Danzberger is trying to make a choice among industry, the Army and Jackie.

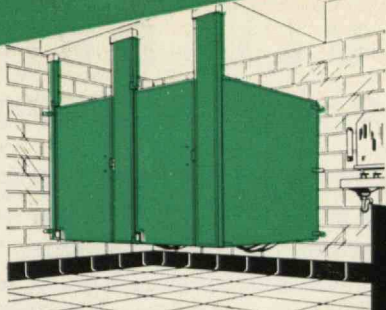
Alex Gutwurcel's summer should be fairly enjoyable as he travels through France, Italy, and Switzerland. After the trip Alex will return to the Institute for a master's degree. The Harry Krimbells expect to become parents this fall while Harry is at grad school, here, at Tech.

Chuck Steggerda will work for Philco this summer and return to the Institute next spring. Mandy Manderson is going to spend two years in the Navy and hopes to be married sometime this fall. Ray Burras and Doug Meyer made June 12 a memorably "wet" occasion. Ray started at Tech in '42, was interrupted twice by Uncle Sam, and now has a good job prospect with General Motors Overseas Operations. Doug will have some company in the Army Engineers, namely, Bruce Beckley, Ed Stolfer, Dick Lockhart and Jul Greenebaum.

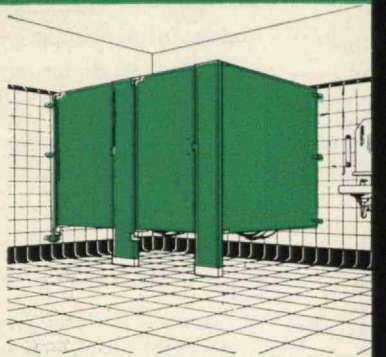
After a vacation in the Pacific Northwest, Joe Spracher will be with Stromberg-Carlson in Rochester, N.Y. Roy Salaman will help in the attempts to perfect color television at Westinghouse. Art Buckley, John Horning, Harry Markarian, Vincent Verlangeri and Cleyon Yowell, all plan to work in the aeronautical field. Art will be working in the gas turbine division of Westinghouse. John, Harry, and Vincent will be employed by North American Aviation Company. Harry is an Army veteran, married and has a young son. Richard Watson and Jim Fenske will help re-enforce the popular thesis "What's good for General Motors is good for the country" at the G.M. plant in Detroit. Richard planned to be married on June 20. Benjamin Coe will work for G.E. Ben is engaged to Margaret Butler (a graduate of Mt. Holyoke). Jay Koogle is looking forward to a vacation in Mexico, and another year at Tech. James Best has a position with the Newport News Shipbuilding and Drydock Company, in addition, wedding bells on June 13, the young lady, Barbara Winshman. Harold Tseklenis was married on June 28 and has a position in the construction field with the Fluor Corporation in Los Angeles. Jim Mast along with his wife and daughter will seek a master's degree in Civil Engineering here at Tech. John Jones will uphold the reputation of us "17" men in Mexico with the help of Betty Culbertson - wedding in June. Joseph Cartwright plans to work for the Monitor Controller Company after marriage on June 13 to Marion Niham. Roman Chapelsky isn't too sure of his wedding date; his field is architecture, job in the Newark area. George Michel who was married on June 20 to Pauline Frei will occupy his time at the Worthington Corporation in Harrison, N. J. John Bennett and Joseph Brodzik are going to help increase our pipe and tube stocks at Revere Brass and Copper and Reading Tube respectively. Richard Griesse will work for John E. Somerville, Architect, in Green Bay, Wis. Gil Gardner and his wife will go through the rigors of flight training in the U.S.A.F. together. Robert Browne was married on June 21, 1953, to Carla B. Fielder, no decision on grad school or job as yet. Yours truly will invade Fort Belvoir on June 20 for summer camp; active duty immediately afterward, and then preparation at Harvard Law School to swell the ranks of politicians who think they can "talk sense to the American people," marriage (?). That's it, for this issue. Will endeavor to contact each of you at least once a year in the future. Thanks for your cooperation in the past and future. — VINSON W. BRONSON, JR., *Secretary*, 33 Wooster Heights, Danbury, Conn.



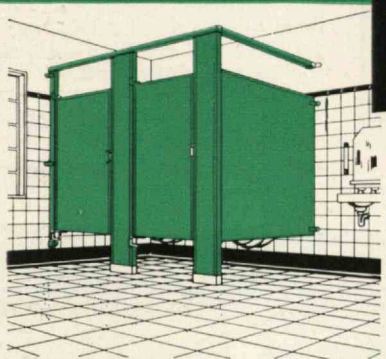
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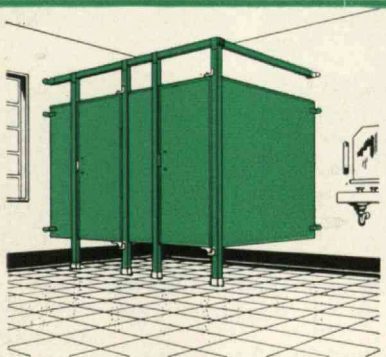
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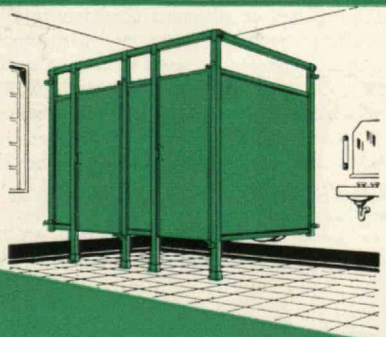
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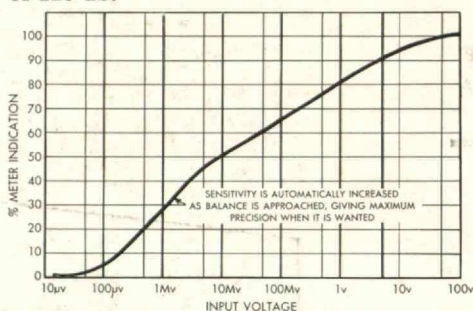
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